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Forest Service

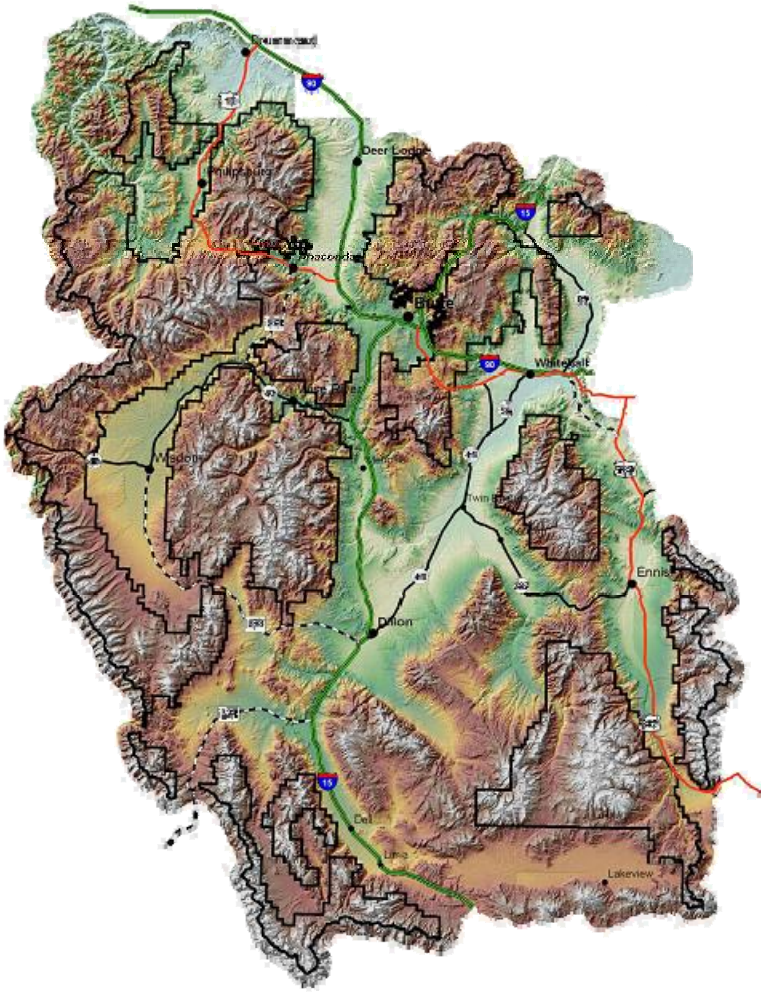
Beaverhead-Deerlodge National Forest

January 2009

Beaverhead-Deerlodge National Forest

Land and Resource Management Plan

Forest Plan



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Preface

The Beaverhead-Deerlodge Forest Plan complies with the National Forest Management Act of 1976 (NFMA); the regulations for the National Forest Land and Resource Management Planning (36 CFR Part 291); and the National Environmental Policy Act of 1969 (NEPA).

Decision notices for individual projects are posted in the Forest Service offices at the time of decision. A list of decision notices may be obtained at each Ranger District, the Supervisor's Office, or on the website at http://www.fs.fed.us/r1/b-d/.

More information about the Forest Plan can be obtained from the Forest Supervisor, Beaverhead-Deerlodge National Forest, 420 Barrett Street, Dillon, MT 59725.

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CHAPTER 1 - REVISION OVERVIEW

The term forest plan in this document refers to forest land and resource management plans in general. The term 1986 Plan refers to the Beaverhead National Forest Plan signed in 1986. The term 1987 Plan refers to the Deerlodge National Forest Plan signed in 1987. The term "revised plan" refers to this document.

This plan consists of five chapters and a glossary. Chapter 1 introduces the revised Beaverhead-Deerlodge Forest Plan and explains the purpose, structure, and relationship to other documents with a general description of the forest. Chapter 2 summarizes and finalizes the Analysis of the Management Situation, (AMS), issued as a draft in 2002, including a description of the need to change for the eight revision topics. Chapter 3 presents forestwide desired conditions, goals, objectives, and standards. Chapter 4 contains specific management area direction. Chapter 5 provides the monitoring and evaluation followed by the glossary. Definitions for recreation allocations, are grouped under "recreation allocations" in the glossary.

Forest plans are prepared in accordance with the 1976 National Forest Management Act (NFMA), the 1969 National Environmental Policy Act (NEPA), and other laws and regulations. This revised Forest Plan implements Alternative 6 outlined in the Final Environmental Impact Statement (FEIS). It guides all natural resource management activities and sets management standards for the Beaverhead-Deerlodge National Forest (BDNF).

PURPOSE OF THE REVISED PLAN

A forest plan establishes guidance for all resource management activities on a National Forest based on the following six decisions required by the 1982 Code of Federal Regulations:

Forestwide multiple-use goals and objectives including projections of goods and services that may be produced (36 CFR 219.11(b)).

Forestwide management requirements (standards) (36 CFR 219.13 – 219.27).

Management area direction and prescriptions, including management practices (36 CFR 219.11(c) and 36 CFR 219.13-219.27.

Lands not suited for timber and the allowable sale quantity (ASQ) (36 CFR 219.14 and 219.16.

Monitoring and evaluation requirements (36 CFR 219.11(d)).

Recommendation to Congress of areas eligible for Wilderness designation as required (36 CFR 219.17).

Land use allocations, suitable management practices, desired conditions, goals, objectives, and standards are statements of the management direction in this plan. Future projects will

follow direction contained in this plan. While forest plans estimate future management activities, actual activities accomplished are determined by annual budgets and site-specific project decisions. Environmental analyses will be conducted, when required, for all projects as they are proposed. In addition to direction in this plan, projects are also guided by Forest Service manuals, handbooks, and other directives.

GENERAL FOREST DESCRIPTION

The BDNF covers 3.38 million acres, in Beaverhead, Butte-Silver Bow, Deer Lodge, Granite, Jefferson, Madison, Powell, and Gallatin counties, in southwestern Montana. Its mountain ranges encompass trout streams and elk populations, Wilderness, and roadless areas. They feature patterns of forest and meadows, expanses of sagebrush and grasslands. The culture is one of western open space traditions and customs.

Table 1. Acres of Beaverhead-Deerlodge National Forest by County in 2004

County	BDNF Acres	Percent of BDNF
Beaverhead	1,372,841	41%
Deer Lodge	207,503	6%
Gallatin	21	< ½%
Granite	472,204	14%
Jefferson	361,066	11%
Madison	694,806	20%
Powell	84,469	2%
Silver Bow	187,090	6%
	3,380,000	100%

The Forest Supervisor's Office is located in Dillon, Montana. Ranger District offices are in Butte, Dillon, Ennis, Philipsburg, Whitehall, Wisdom, and Wise River. The Forest is managed for a wide range of resources and opportunities including watersheds, wildlife, Wilderness, livestock grazing, recreation, wood products, and minerals, oil and gas.

FOREST NICHE - DISTINCTIVE ROLE AND CONTRIBUTION

The Beaverhead-Deerlodge National Forest is unique for its nationally renowned trout streams, large elk populations, and uncrowded backcountry recreation. It contributes to species diversity, Greater Yellowstone Ecosystem, public open space, recreation, tourism, commodity production, and to local economic opportunities.

Straddling the Continental Divide the BDNF provides the headwaters for rivers flowing through both the western and central United States. These streams are valued for abundant fish habitat and recreational opportunities. They are also important to local communities and agricultural enterprises.

Complex geology contributes to the scenery, recreational opportunities, and local economies. Mineral extraction has attracted people since prehistoric times and continues today.

There is a continental climate and four distinct seasons. About half of Montana's native plant species are present. The BDNF also supports diverse wildlife and is recognized for large populations of big game, especially elk.

The rich cultural history of southwestern Montana is inextricably tied to the resources. Historic features are common, from aboriginal flint collection sites to European settlements which created the area's mining and ranching heritage. Forest resources support the present day lifestyles and traditions which include hunting and fishing, camping, ranching, firewood cutting, etc.

The BDNF offers a wide variety of recreation activities. Day hikes in non-motorized settings, picnicking, and OHV trails are available within a 30 minute drive of regional population centers including Butte, Anaconda, Deerlodge, Philipsburg, Boulder, Ennis, Whitehall, Helena, and Dillon. Hunting includes a mix of walk-in and OHV activities. In the winter people go downhill and cross-country skiing as well as snowmobiling when snow conditions are favorable. There are opportunities for backpacking and stock use in Wilderness and other primitive areas. Backcountry travel routes in other areas provide off-highway vehicle and bicycle riding opportunities. The high country offers more than 240 mountain lakes in a variety of settings.

Recreation opportunities are also available through private business operations including skiing and snowmobiling, recreation resorts, outfitters and guides. Partnerships and agreements with local recreation groups provide groomed cross-country skiing and snowmobile trails. Recreation opportunities across the Forest are also enhanced by roads, trails, picnic and campgrounds, trailheads, and interpretive sites.

Unique qualities are preserved and ecosystem integrity is a management focus, in addition to providing the settings for activities which will enrich communities into the future.

CHAPTER 2 - ANALYSIS OF THE MANAGEMENT SITUATION SUMMARY

In the spring of 2002 the Forest Service announced the revision of the Beaverhead and Deerlodge National Forests land and resource management plans, to provide a broad framework of decisions to identify the kind of land use allowed. A draft of the Analysis of the Management Situation (AMS) was released in December 2002 describing why and what changes were sought through revision. Numerous public information forums were held in communities throughout southwestern Montana. Comments on the AMS generally supported the need to change findings. Based on public comments, with further analysis and discussion, the revision topics were refined and are described below. These changes conclude the Analysis of the Management Situation and constitute the final documentation.

Following is a brief summary of the analysis of the management situation, including demand and supply conditions for resource commodities and services (36 CFR 219.11(a) and a description of the revision topic benchmarks used to frame alternative development (36 CFR 219.12(e). Much of this information was derived from the accompanying Final Environmental Impact Statement (FEIS). Legal requirements of an AMS, described in CFR 219.12(e), are met by a combination of the Draft AMS, 2002, the summary below and detailed discussion of revision topics in the FEIS.

MODIFICATIONS TO THE DRAFT AMS

Through the analysis process primary revision topics were refined into recommended wilderness vegetation, wildlife, aquatic resources, recreation and travel management, fire management, livestock grazing, and timber management.

Additional topics not identified as primary revision topics, were addressed in the FEIS. They were refined as: noxious weeds, Research Natural Areas, and Wild and Scenic Rivers, heritage resources, lands and special uses, minerals, roadless areas, soils, air quality and sensitive plants.

Benchmarks were more fully developed to guide formulation of alternatives. The benchmarks are described below. These changes conclude the Analysis of the Management Situation and constitute the final documentation.

SUMMARY OF RESOURCE COMMODITIES AND SERVICES

Recreation

A wide variety of recreation opportunities are offered on the Beaverhead-Deerlodge National Forest (BDNF) with an emphasis on dispersed recreation. There are 219,000 acres of designated Wilderness and an additional 1.8 million acres of inventoried roadless areas

(IRAs). There are approximately 2600 miles of trails, most of which are available to hikers, horseback riders, and mountain bikers. Almost half of the trails are also available to motorcycles or ATVs. Nearly 85% of approximately 6800 miles of roads are open to motorized public use. There are many developed campgrounds and trailheads. Ski areas are located on National Forest System lands outside the towns of Dillon and Philipsburg. Other major recreational activities include hunting and snowmobiling.

The majority of recreation on the BDNF is dispersed, meaning it does not rely on or concentrate around constructed facilities. Demand for both dispersed and developed recreation is expected to continue growing at 10% per decade, based on recent national recreation surveys (USDA, 2001). The BDNF has the capacity to support demand for developed and dispersed activities for at least the next 50 years.

Demand for Wilderness recreation experiences, based on visitation only, is currently about 5,700 visits (USFS, 2005). Demand for Wilderness recreation is also expected to continue growing at 10%/decade. Demand for Wilderness based on ecological and societal need is more difficult to quantify as it applies to a single forest, but is addressed by the Region 1 Wilderness Needs Assessment (USDA, 2003).

Timber Production

Timber harvest is a long time historic use of the BDNF. Approximately 1,489,000 acres are tentatively suitable for timber production. Productivity is considered low to moderate, with an estimated mean annual growth on all forested lands of 46 cubic feet per acre per year (BDNF, Forest Inventory Analysis data). From 1987 to 2005 an average of 14 million board feet per year were sold from a base of 676,000 acres of land suitable for timber production and 768,000 acres where harvest was allowed (excluding the Elkhorn Mountains).

This plan allocates 299,000 acres as lands suitable for timber production. Timber harvest is allowed on another 1,614,000 acres to achieve other resource objectives

Less than 15 percent of the stumpage in the 7 county area that includes the BDNF comes from this Forest. The majority comes from private lands. Within the larger timer processing area of 14 counties, there are 148 timber processing facilities including 64 log home manufacturers, 38 sawmills, 25 post and pole plants, 18 log furniture manufacturers and three plywood facilities. Sawtimber mill capacity has declined in the area that uses stumpage from the BDNF by approximately 6% from 1985 to 2000. During the same time mill capacity for the state of Montana fell a much larger 31%. The timber demand assessment is based on a study of the BDNF timber processing area (Keegan 2004) and an analysis of Montana's forest products industry (Keegan 2001).

Supply potential or long-term sustained yield for the Forest is based on the SPECTRUM model. The Long Term Sustained Yield for the preferred alternative without budget constraints is 24 million board feet, compared to the maximum timber benchmark of 118 million board feet. Neither figure includes projections for timber harvest on non-suitable lands for other purposes. Long term sustained yield exceeds estimated outputs for harvest based on budgets and other management constraints.

Livestock Grazing

Permits are required for livestock grazing on BDNF lands. Permitted use is 87% of numbers in the mid-1980s. Actual use has declined by 44% but numbers fluctuate annually depending on economics and weather. In 2001, 36,579 of the permitted 50,750 cattle grazed on the BDNF and 13,050 of the permitted 15,600 sheep.

Demand for livestock forage is expected to increase to the extent of available permitted use . However, increases in grazing fees, or more restrictive regulations, affecting use of National Forest rangeland could decrease demand.

Leasable and Locatable Minerals

The BDNF does not have a high potential for oil and gas discoveries. Areas with moderate potential are confined mostly to the Gravelly, Lima Peaks and Tendoy Mountain ranges within inventoried roadless areas. Ten-year leases were issued in 2006 in the Garfield Mountain area but exploration and development are not likely. If the 2001 Roadless Area Conservation Rule applies, it will constrain development although demand for oil and gas and the value of the deposits is expected to increase over the coming years.

Locatable minerals are those valuable deposits subject to exploration and development under the Mining Law of 1872 and its amendments. More than ½ of BDNF lands are classified as favorable for one or more polymetallic mineral deposits. Demand is closely tied to economics and international markets.

BENCHMARK ANALYSIS

Benchmark analysis is required as part of the AMS in planning regulations in the Code of Federal Regulations 36 CFR 219.12(e)(1) (1982). Benchmarks help define the maximum and minimum range within which alternatives can be constructed using the minimum management requirements defined in 36 CFR 219.27. Selection of benchmarks depends on the primary revision topics.

Benchmarks for livestock grazing, recreation, wildlife, and wilderness, developed during the 1986 and 1987 planning process were reviewed, validated, and found appropriate. For vegetation and fire the historic range of variability described in Chapter 3 of the FEIS, “Vegetation Management – Affected Environment” serves as a benchmark. Benchmarks for fisheries in the 86/87 Plans are not relevant to the aquatic revision topic which focuses on watershed health and viability of native species. Alternatives 3 (watershed restoration and conservation) and Alternative 4 (sustainable commodity outputs) serve as minimum and maximum benchmarks for this topic.

Benchmarks were re-established for the timber revision topic using the SPECTRUM model. Three benchmarks were analyzed - maximizing timber production for the first decade, maximizing present net value (PNV) of the timber program, and minimizing the level of timber management.

Validation of 1986/87 Benchmarks

The 1986/87 Plans developed benchmark numbers for recreation, elk, game fish, livestock forage (AUMs), and acres of wilderness, and timber production. A program called FORPLAN produced the numbers based on constraints and assumptions documented in Appendix B of the 1986 FEIS. For this exercise, the benchmark numbers produced by FORPLAN were evaluated (adding 1986 Beaverhead and 1987 Deerlodge plan estimates) and compared to current data and science to determine whether they continue to be reasonable.

Livestock Forage Production: Livestock forage production maximums measured in Animal Unit Months (AUMs), appear to be reasonably close to maximum supply potential. These numbers are closely tied to land capability which has not changed over the past 20 years. The Beaverhead estimate was 264,800 AUMs and the Deerlodge estimated 81,800 AUMs for a total of 346,600 AUMs. The minimum benchmark for livestock grazing would be zero AUMs.

Wilderness Potential: Wilderness potential increased slightly since the early 1980s based on acres inventoried as roadless. The 2005 inventory increased by 12%, largely from additions in Lost Creek, the Madison Range, and Garfield Mountain. The remaining increase is because of improved mapping (GIS) and minor additions to existing roadless areas. The 1986 benchmark used 1,246,000 acres in addition to existing Wilderness. In 2007, 1,468,122 roadless area acres comprised the maximum wilderness benchmark. The minimum wilderness benchmark is zero acres of roadless recommended, represented by Alternative 4. The 2001 Roadless Area Conservation Rule, if it applies, constrains consideration of an alternative that opens roadless areas to development using road construction or timber harvest.

Elk Population Numbers: The number of elk predicted for the 1986 and 1987 benchmarks is low compared to 2001 Montana Fish, Wildlife, and Parks (MTFWP) Elk Plan Objectives. Actual counts are considerably higher than the previous benchmark of 23,200 animals.

Table 2. Elk Population Maximum Benchmark Compared to Current Populations

Number of Elk	Previous BDNF Benchmark	2001 State Objective Applied to BDNF	Actual Count in 2005
Winter	18,650		32,841*
Summer	23,200	26,720 – 29,300	

**The actual MT FWP count was 41,052 elk in the analysis area. This number estimates 80% of those animals summer on the BDNF. The States Elk Objective (Elk Plan 2001) is 33,400 – 36,700 animals, of which 80% is 26,720-29,300.*

The maximum benchmark is adjusted upward to meet the actual MTFWP population count for elk management. This number is considerably higher than the State elk objective, it's an ideal number rather than maximum capability. The maximum benchmark population is 33,000 animals. The MTFWP Objective of 29,300 (80% of 36,700) animals is considered the demand. A minimum benchmark was not provided.

Recreation Use Potential: Projections for maximum visitor use potential are similar to previous projections. The 1986 and 1987 projections were compared with current use and no adjustments to the previous benchmarks were necessary. Projections in 1986 show the

capability to supply three times more recreation use than the BDNF did at the time of this analysis. Updated projections agree the Forest can supply three times more use than shown in the 2005 NVUM survey. However, the distribution of use between developed camping and hunting does not fit the distribution of current use or future predictions. Hunting was underestimated in the 1986 document and developed recreation was overestimated as explained in Table 5 on the next page.

Table 3. Distribution of Recreation Activities Compared to the Present

Recreation	Maximum	Actual based on 2005 NVUM*	Maximum Benchmark based on updated percentages
Developed	30%	5%	279,600
Dispersed	66%	69%	3,858,480
Wilderness	2%	2%	111,840
Hunting and Fishing	3%	24%	167,760
Total Recreation Visitor Days	5,592,000	1,750,000	5,592,000

** National Visitor Use Survey 2005. Visits were converted to Recreation Visitor Days (RVDs) using a factor of 1 visit = 1,259 RVDs or 1 RVD= .795 visits.*

The previous plans used 1980 recreation visitor levels as a base level to establish the minimum recreation benchmark. This benchmark is still reasonable.

New Benchmarks

Maximum Timber Production: This benchmark indicates the maximum capability, under the current legal framework, to produce timber on the BDNF and the costs/benefits of doing so. SPECTRUM software was used as a timber harvest scheduling tool, reporting timber outputs and timber costs and benefits. SPECTRUM was not used to make land allocation decisions. Based on 2004 SPECTRUM runs, the maximum timber benchmark has an allowable sale quantity (ASQ) of 720 MMBF in decade 1 (72.0 MMBF/year), with harvest occurring on 82,693 acres. Long term sustained yield (LTSY) for this benchmark is 23.6 MMCF/year or 118 MMBF/year calculated on 1,455,247 acres. The 1986 and 1987 benchmarks can be compared in the table below.

Table 4. Previous timber benchmarks compared to 2004 maximum timber production

Measure	Beaverhead Forest Plan Benchmark 1986*	Deerlodge Forest Plan Benchmark 1987**	Combined Total	Maximum Timber Volume 2004 SPECTRUM	Maximum PNV 2004 SPECTRUM
Suitable Acres	804,200	594,771	1,398,971	1,455,247	1,455,247
LTSY (MMBF)	68.1	46.7	114.8	118	112
ASQ in decade 1 (MMBF)	53.5	28.4	82	720	715

**Page II-10 1986 Beaverhead FEIS*

*** Page II-15 1987 Deerlodge FEIS*

Long term sustained yield benchmarks for timber have not changed notably in the last 20 years despite updates in the model assumptions and constraints**.** The 2004 LTSY benchmark is 3% higher than the benchmark prior to 1986. Suitable acres vary only by 4%, a difference that may be a result of improved computer mapping technology.

The small difference in the ASQ harvest in decade one may reflect some of the changes made to the model (Harry 2006). Both the FORPLAN and SPECTRUM models were based on yield outputs of Forest Vegetation Simulator (FVS).

In the last 20 years, continual adjustments were made to FVS. Most of the adjustments relate to mortality – the original vegetation simulator considered trees growing very dense and predicted stands would continue to accrue volume as they did so. The current tables more closely reflect what is taking place in actual stands. As they become denser, mortality increases. Yield tables only calculate live volume, so it begins to drop as stands reach a certain age. In addition, constraints built into the model produce different results due to 40,000 acres of timber harvest between 1986 and 2004.

Maximum Present Net Value for Timber: This benchmark explores the opportunity to maximize the net monetary value of the timber resource. It provides a basis for evaluating the costs and benefits of implementing other alternatives, each of which is constrained to meet specific resource management objectives.

The SPECTRUM model provides volumes, acres, and a financial report for optimizing maximum present net value (PNV) of timber.) The benchmark for modeled volumes and acres in the maximum PNV scenario (over a horizon of 50 years) is presented in the table below.

Table 5. Maximum Present Net Value for Timber

Category	Annual Volume	PNV of Benefits	PNV of Costs	Cumulative PNV
Maximum PNV	71.5 mmbf	$292,292,000	$201,666,000	$90,626,000

A maximum PNV was not modeled for resources other than timber. Use of the SPECTRUM model was confined to those activities for which accurate cost and value data for the BDNF was available and could be applied spatially.

There is no accurate data to quantify opportunity costs for maximizing aquatic species, water quality, or wildlife. They are addressed through the range of alternatives, by resource, in the FEIS. Opportunity costs for maximizing Wilderness and roadless areas, are also addressed by the range of alternatives in the FEIS.

Minimum level of timber management: The minimum level benchmark for timber would show no commercial timber production or an ASQ of zero. The PNV for timber is zero, since there would be no costs incurred (for timber) and no revenues generated.

CHAPTER 3 - FORESTWIDE DIRECTION

This section presents desired conditions, goals, objectives and standards that apply forestwide. If there are additional objectives and standards for specific areas it will be listed in the appropriate management area in Chapter 4. For example, the Elkhorn Mountains Landscape, managed by the Helena National Forest will retain management direction as described in the 1987 Deerlodge Forest Plan. It will apply until revision of the Helena Forest Plan.

FORESTWIDE DESIRED CONDITION

- Ecological processes, which affect the chemical, physical, and biological components of the aquatic and terrestrial ecosystems and fully support designated beneficial uses, are present and functioning to provide the diversity of forest, shrub land, grassland, riparian, and aquatic communities.
- Conditions for self-sustaining or viable populations of native and desired non-native plant and animal species are supported within the natural capability of the ecosystem.
- Natural disturbance processes are recognized and accepted as essential to the health of ecological communities at various spatial scales. Fire is allowed to play its natural role where appropriate and desired. Life, investments, and valuable resources are protected using the full range of responses to wildland fire.
- Issues involving species with needs that go beyond Forest boundaries and authority are identified and resolved in conjunction with other federal agencies, state, county, tribal, and city governments.
- People and communities benefit from programs and infrastructure that support livestock grazing and an array of forest products and services. Methods for using resources to benefit people while maintaining functioning ecosystems are employed.
- Visitors benefit from a range of primitive to developed recreation settings and opportunities. Most of the BDNF continues to offer uncrowded motorized and non-motorized backcountry opportunities.
- Mineral and energy resources are explored, developed, and produced according to national direction.
- Resources adversely affected by past management activities have been rehabilitated or the related public health and safety issues corrected.
- National Forest land ownership patterns contribute to the open rural landscape and scenery of southwestern Montana. Forest managers act in partnership with adjacent landowners to capitalize on the contribution all lands make to this unique quality.
- National Forest System lands have been consolidated through land adjustments. Right-of-ways and conservation easements have been acquired to maintain the integrity of resources and provide public access.
- Heritage resources are preserved and managed for the benefit of the American public.

FORESTWIDE GOALS, OBJECTIVES, AND STANDARDS

These goals, objectives and standards apply only to National Forest System lands and are measured at the forestwide scale unless specifically stated otherwise. The time frame to achieve objectives is 10 to 15 years unless stated otherwise. These goals, objectives and standards do not alter any legal or statutory rights such as mineral development or private lands access or reduce the need to provide public or employee safety. These goals, objectives and standards do not supercede law, or regulation in the event of conflict between them. Standards apply only to management actions. Standards are applied to management actions as mitigation; they do not initiate management actions.

AIR QUALITY

Goals

Air Quality: Air quality is maintained within the standards set by federal and state agencies and by the Montana Airshed Group's Memorandum of Agreement and State Implementation Plan.

Smoke Management: A variety of management tools, (including prescribed fire and appropriate management response) are used to help manage vegetation to reduce potential smoke.

Objectives

Emissions and Trends: Emissions data and trend information are developed for fires to be stored in a centralized database within five years or within the timeframe required by Montana's State Implementation Plan. The data will be used to document compliance with Regional Haze requirements established by the State.

Standards

Standard 1: Meet smoke management requirements according to the Idaho/Montana Airshed Group Operating Guide.

AMERICAN INDIAN RIGHTS AND INTERESTS

Goals

Tribal Governments: Forest officials respect that tribal governments are sovereign nations with a strong interest in National Forest System land management.

Objectives

Traditional Cultural Properties: Identify and protect traditional cultural properties (TCPs).

Treaty Rights: Recognize and support treaty rights and tribal values when planning and implementing forest management activities.

Standards

Standard 1: No impact to identified TCPs shall occur until Forest officials consult with the tribe or other cultural group who identified the property and their concerns have been considered. TCPs shall be identified through proactive consultation with affected tribes.

AQUATIC RESOURCES

This section contains abbreviations in parenthesis to indicate the Inland Native Fish Strategy goals, objectives, and standards carried forward as part of this plan.

Goals

Watersheds: Watersheds are maintained to ensure water quality, timing of runoff, and water yields necessary for functioning riparian, aquatic ecosystems, wetlands, and to support native aquatic species reproduction and survival. Watershed restoration projects promote long-term ecological integrity of ecosystems, conserve genetic integrity of native species, and contribute to attainment of desired stream function and support beneficial uses (IN 1).

Fish Key Watershed: Populations of bull trout and westslope cutthroat trout exhibit numbers, life histories, age classes, recruitment levels, and reproductive characteristics representative of historic conditions.

Restoration Key Watershed: Fish habitat, riparian habitat, and water quality are recovered to desired conditions developed through watershed assessments.

Watershed Restoration Projects: Projects are designed and implemented to promote long-term ecological integrity of ecosystems, conserve the genetic integrity of native species, and contribute to attainment of desired stream function (WR-1).

Municipal Watersheds: Site-specific criteria for managing municipal watersheds are developed, and degraded waters are restored to meet goals of the Clean Water Act and Safe Drinking Water Act.

Total Maximum Daily Loads (TMDLs): Management actions are consistent with TMDLs. Where waters are listed as impaired and TMDLs and Water Quality Restoration Plans are *not* yet established, management actions do not further degrade waters. Water quality restoration supports beneficial uses.

Stream Channels: Stream channel attributes and processes are maintained and restored to sustain natural desired riparian, wetland, and aquatic habitats and keep sediment regimes as close as possible to those with which riparian and aquatic ecosystems developed (IN 2).

Instream Flows: Instream flows are secured to support functioning riparian and aquatic habitats, stable and effective stream function, and ability to route flood discharges (IN 3).

Floodplains: The condition of floodplains, channels and water tables are maintained and restored to dissipate floods and sustain the natural timing and variability of water levels in riparian, wetland, meadow and aquatic habitats (IN 4).

Riparian Areas: Riparian habitat, species composition, and structural diversity of native and desired non-native riparian plant communities are maintained or restored to (IN 5-6):

- Provide an amount and distribution of woody debris characteristic of functioning aquatic and riparian ecosystems;
- Provide adequate summer and winter thermal regulation for streams to support beneficial uses;
- Provide bank stability to maintain rates of surface erosion, bank erosion, and channel migration which are characteristic of functioning aquatic and riparian ecosystems;
- Effectively trap and store sediment, build stream banks and floodplains, and promote recovery after watershed disturbance.

Riparian Habitat: Habitat to support viable, well distributed populations of native and desired non-native plant, invertebrate, and vertebrate aquatic- and riparian-dependent species are maintained or restored. Movement corridors within and between watersheds, where desired, are maintained or restored to provide aquatic-dependent species' habitat needs and maintenance of metapopulations (IN 8).

Riparian and aquatic habitats necessary to foster the unique genetic fish stocks that evolved within the specific geo-climatic region are maintained or restored (IN 7).

Channel Integrity: Stream channel function and water quality are maintained or restored to support designated beneficial uses on all reaches through management decisions, restoration projects or Best Management Practices as outlined in the Soil & Water Conservation Practices Handbook.

Aquatic Nuisance Species: Introductions of aquatic nuisance species in riparian and aquatic habitats are prevented. Forest biologists work cooperatively with appropriate state and federal agencies, or other stakeholders to reduce or eliminate impacts, where aquatic nuisance species are adversely affecting the viability of desired aquatic species.

Snow Courses, Telemetry Sites: Established snow courses, snow pack telemetry sites, and precipitation gauges are protected.

Sensitive Aquatic Species: Viable populations of sensitive aquatics species are maintained (R1 Sensitive Species list) by managing habitat.

Ungulate Impacts: Wild ungulate impacts that prevent attainment of the desired stream function or adversely affect native fish and sensitive aquatic species are identified and addressed through cooperation with federal, tribal, and state wildlife management agencies (FW 3).

Agency Cooperation: Adverse effects on native fish or sensitive aquatic species associated with habitat manipulation, fish stocking, fish harvest, and poaching are identified and addressed through cooperation with federal, tribal, and state fish management agencies (FW 4).

Leases, Rights-of-way, Easements: Leases, permits, rights-of-way, and easements are issued to avoid effects that would prevent attainment of the desired stream function and avoid adverse effects on threatened and endangered aquatic species and adverse impacts to sensitive aquatic species.

Where the authority to do so was retained, existing leases, permits, rights-of –ways, and easements are adjusted to eliminate effects that would retard or prevent attainment of the desired stream function or adversely effect on threatened and endangered aquatic species and adverse impacts to sensitive aquatic species. Where adjustments are not effective, the activity is eliminated.

Where the authority to adjust was not retained, existing leases, permits, right-of-way, and easements are negotiated with the lead agency to make changes to eliminate effects that would prevent attainment of the desired stream function, adversely affect threatened and endangered aquatic species, or adversely impact sensitive aquatic species.

Priority for modifying existing leases, permits, right-of-way and easements would be based on the current and potential adverse effects on native fish and sensitive aquatic species, and the ecological value of the riparian resources affected (LH 3).

Acquisitions and Exchanges: Land acquisition, exchange, and conservation easements are used to meet desired stream function and facilitate restoration of fish stocks and other species at risk of extinction (LH 4).

Livestock Grazing: Grazing practices are designed to attain, or maintain, desired stream function (GM 1).

Mineral Operations: Mineral operations minimize adverse effects to threatened and endangered fish species or adverse impacts to sensitive aquatic species (MM 1).

Mining Facilities: Structures, support facilities, and roads are located outside RCAs (MM 2**).**

Roads: Roads are designed, constructed, and maintained to meet desired stream function and avoid adverse effects to native fish and sensitive aquatic species (RF 2**).**

Transportation Atlas: The Transportation Atlas addresses the following items (RF 2c**):**

1. Road design criteria, elements, and standards that govern construction and reconstruction.
2. Road management objectives for each road which include criteria for operation, maintenance, and management.
3. Season of use and type of vehicle.
4. Road condition surveys to identify annual and deferred maintenance needs

Stream Crossings: Culverts, bridges, and other stream crossings can accommodate a 100-year flood, including associated bedload and debris (RF 4).

Recreation Sites: Developed sites, dispersed sites, and trails are designed, constructed, and maintained in a manner which achieves desired stream function (RM 1**).**

Water Drafting Sites: Water drafting sites are located in a manner that does not retard or prevent the attainment of desired minimum stream flows and stream function or have adverse effects, on threatened and endangered aquatic species or adverse impacts to sensitive aquatic species (RA 5**).**

Objectives

Vegetation Management: Manage vegetation to reduce the risk of adverse wildfire impacts to isolated native fish populations and water resources at the sub-watershed scale (6^{th} Code HUC).

TMDLs: Cooperate with the state, tribal, and other agencies and organizations to develop and implement Total Maximum Daily Loads (TMDLs) and their implementation plans for 303(d) impaired water bodies influenced by National Forest System lands.

Watershed Analysis: Prepare and maintain a schedule for completing watershed analysis, with emphasis on key watersheds shown on page 58, or listed in Appendix H (IN).

Management Indicator Species: Maintain habitat conditions for native species as reflected by changes in abundance of *Drunella doddsi* (Mayfly) as a Management Indicator Species (MIS).

Restoration Key Watersheds: Complete watershed assessments for restoration key watersheds and associated restoration activities.

Spawning Areas: Reduce impacts from grazing practices in known or suspected threatened, endangered or sensitive fish spawning areas to avoid or reduce trampling of redds that may result in adverse impacts to threatened or endangered species, loss of viability, or a trend toward federal listing of sensitive species **(**GM 4**).**

Riparian Management Objectives: Establish stream specific Riparian Management Objectives (RMOs) using watershed or other analyses incorporating data from streams at or near desired function. RMOs are a means to define properly functioning streams and measure habitat attributes against desired condition. The following RMOs apply by stream reach until new RMOs are developed through watershed or other site specific analysis,

(West of the Continental Divide)

Pool Frequency (all systems) width/number of pools: 10/96, 20/56, 25/47, 50/26, 75/23,100/18,125/14,150/12, 200/9

Large woody debris (forested systems) >20 pieces per mile, > 12 inch diameter, >35 foot length.

Bank stability (nonforested systems) >80% stable.

Lower bank angle (nonforested systems) >75% of banks with <90 degree angle (i.e., undercut).

Width/ Depth ratio (all systems) <10, mean wetted width divided by mean depth.

Water Temperature: Water temperatures meet life history requirements for native fish species.

(East of the Continental Divide)

Entrenchment Ratio (all systems) Rosgen Channel: A - <1.4, B – 1.6 – 1.8, C - >10.3, E - >7.5.

Width/Depth Ratio (all systems) Rosgen Channel: A - <11.3, B – <15.8, C - <28.7, E - <6.9.

Sediment Particle size, % < 6.25mm (all systems) Stream Type: B3 - <12, B4 - <28, C3 - <14, C4 - <22, E3 - <26, E4 - <28.

Large Woody Debris: (forested systems) >20 pieces per mile, > 6 inch diameter, >12 foot length.

Bank Stability: (nonforested systems) >80% stable.

Wildland Fire Management: Suppression activities are designed and implemented so as not to prevent attainment of desired stream function, and to minimize disturbance of riparian ground cover and vegetation. Strategies recognize the role of fire in ecosystem function and identify those instances where fire suppression actions could perpetuate or damage long-term ecosystem function or native fish and sensitive aquatic species (FM 1**).**

Temporary Fire Facilities: Incident bases, camps, helibases, staging areas, helispots and other centers for incident activities are located outside of RCAs. An interdisciplinary team, including a fishery biologist, is used to predetermine incident base and helibase locations during pre-suppression planning (FM 2**).**

Fire Suppression: Chemical retardant, foam, or additives are not delivered to surface waters. Guidelines (fire management plan) are developed to identify exceptions in situations where overriding safety or social imperatives exist (FM 3**).**

Mineral Inspection: Mineral activities are inspected and monitored. The results of inspections and monitoring are evaluated and applied to modify mineral plans, leases, or permits as needed to eliminate impacts that prevent attainment of desired stream function and avoid adverse affects on threatened and endangered aquatic species and adverse impacts to sensitive aquatic species (MM 6**).**

Road Drainage: Reconstruct road and drainage features that do not meet design criteria or operation and maintenance standards, or are proven less effective than designed for controlling sediment delivery, or retard attainment of desired stream function, or increase sedimentation in Fish or Restoration Key Watersheds (RF 3a**).**

Roads: Close and stabilize or obliterate and stabilize roads not needed for future management activities (RF 3c**).**

Recreation Sites: Existing, new, dispersed, or developed recreation sites and trails in RCAs are adjusted if they retard or prevent attainment of desired stream function, or adversely affect threatened or endangered species or adversely impact sensitive species. Adjustments may include education, use limitations, traffic control devices, increased maintenance, and relocation of facilities (RM 1)**.**

Bull Trout Restoration: Prioritize bull trout restoration activities with consideration given to bull trout core areas population status and health. Coordination will occur with USFWS, other federal, state, and local agencies.

Standards

Standard 1: Riparian Conservation Area (RCA) -1 Any activity in RCAs shall be designed to enhance, restore, or maintain the physical and biological characteristics of the RCA by implementing the following requirements.

a. Activities in RCAs, that meet or exceed RMOs, must be designed to maintain existing stream function.

b. Activities in RCAs that are not meeting RMOs shall include a restoration component, commensurate with the scope of the activity affecting the fishery, which trends towards accomplishing desired stream function, as part of the project.

c. Activities in RCAs shall not result in long-term degradation to aquatic conditions. Limited short-term effects from activities in the RCA may be acceptable when outweighed by the long-term benefits to the RCA and aquatic resources.

Standard 2: Evaluate the risks of aquatic nuisance /exotic species introduction as part of project analysis (Scale – Project area).

Standard 3: Snow courses, snow pack telemetry sites, and precipitation gauges will be protected from project activity including maintenance of an adequate buffer to maintain reliability (Scale – Project Area).

Standard 4: Watersheds that provide water for public water supplies (i.e. where waters are classified by the State of Montana as A-Closed or A-1) shall be managed to meet State water quality standards established for protection of drinking water quality and be consistent with applicable source water protection plans.

Standard 5: New activities within known sensitive amphibian breeding sites and natal areas during breeding and juvenile rearing periods will not cause a threat to population viability or a trend toward federal listing (Scale - Breeding sites and natal areas identified at the project level).

Standard 6: New management activities in Restoration Key Watersheds will be consistent with recovery of desired aquatic systems.

Standard 7: Guidance defined in 16.2 – Section 1 (Permit Administration) of Beaverhead-Deerlodge Supplement No. 2209.13-98-1 to the Grazing Permit Administration Handbook Title 2209.13 will become mandatory rather than discretionary in Fish Key Watersheds when

grazing contributes to degraded westslope cutthroat or bull trout stream conditions, and there is non-compliance with livestock grazing standards; or other aspects of livestock grazing permits terms and conditions.

Standard 8: New projects will have a beneficial effect or no measurable negative effect on westslope cutthroat or bull trout in Fish Key Watersheds. Short term negative effects are acceptable if outweighed by long term benefits.

Standard 9: Restoration projects should correct existing problems, not mitigate effects created by proposed activities (WR 3).

Standard 10: If the only suitable location for incident bases, camps, helibases, staging areas, helispots and other centers for incident activities are within the RCA, an exemption may be granted following a review and recommendation by a resource advisor. The line officer will prescribe the location, use conditions, and rehabilitation requirements with avoidance of adverse effects to native fish and sensitive aquatic species as a primary goal.

Standard 11: Monitor water quality and aquatic resources in fish key watersheds where chemical retardant, foam, or additives are delivered to surface waters. Monitoring should take place as soon as conditions allow for safe access.

Standard 12: Require instream flows and habitat conditions for hydroelectric and other surface water development proposals to maintain or restore riparian resources, favorable channel conditions, fish passage, reproduction, and growth. Coordination will occur with the USFWS, other federal, state, and local agencies. (LH 1).

During re-licensing of hydroelectric projects, provide written and timely license conditions to the Federal Energy Regulatory Commission (FERC) , that require fish passage and flows and habitat conditions that maintain/restore riparian resources and channel integrity. Coordinate re-licensing projects with the appropriate state agencies.

Standard 13: Locate new hydroelectric ancillary facilities for existing permits, outside RCAs. For existing ancillary facilities inside the RCA essential to proper management, provide recommendations to FERC to assure the facilities would not prevent attainment of the desired stream function and adverse effects on native fish and sensitive aquatic species are avoided. Where these objectives cannot be met, provide recommendations to FERC that such ancillary facilities should be relocated. Locate, operate, and maintain hydroelectric facilities that must be located in RCAs to avoid effects that would retard or prevent attainment of the desired stream function and avoid adverse effects on native fish and sensitive aquatic species (LH 2).

Standard 14: Grazing practices that prevent attainment of desired stream function, or are likely to adversely affect threatened or endangered species, or adversely impact sensitive species, are modified to attain desired stream function or population objectives (GM 1)**.**

Standard 15: Locate new livestock handling and/or management facilities outside of Riparian Conservation Areas. For existing livestock handling facilities inside Riparian Conservation Areas, assure facilities do not prevent attainment of desired stream function. Relocate or close facilities where these objectives cannot be met (GM 2).

Standard 16: Limit livestock trailing, bedding, watering, salting, loading, and other handling efforts to those areas and times that would not retard or prevent attainment of desired stream function or adversely affect native fish and sensitive aquatic species (GM 3).

Standard 17: If a notice of intent indicates a mineral operation would be located in an RCA, the effects of the activity on native fish and sensitive aquatic species is considered in the determination of significant surface disturbance pursuant to 36 CFR 228.4. For operations in an RCA, operators take all practicable measures to maintain, protect, and rehabilitate fish and wildlife habitat, which may be affected by the operations. Bonding requires the cost of stabilizing, rehabilitating, and reclaiming the area of operation will be covered (MM 1).

Standard 18: Where no alternative to placing facilities in RCAs exists, facilities are located and constructed in ways that avoid impacts to RCAs and streams and adverse effects on native fish and sensitive aquatic species. Where no alternative to road construction exists, roads are kept to the minimum necessary for the approved mineral activity. Roads no longer required for mineral or land management activities are closed, revegetated, or obliterated (MM 2).

Standard 19: Solid and sanitary waste facilities in RCAs are prohibited. If no alternative to locating mine waste (waste rock, spent ore, tailings) facilities in RCAs exists, releases can be prevented, and stability can be ensured, then (MM 3):

a. Analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.

b. Locate and design the waste facilities using the best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in Riparian Conservation Areas.

c. Monitor waste and waste facilities to confirm predictions of chemical and physical stability, and make adjustments to operations as needed to avoid adverse effects to native fish and sensitive aquatic species and to attain desired stream function.

d. Reclaim and monitor waste facilities to assure chemical and physical stability and re-vegetation to avoid adverse effects to native fish and sensitive aquatic species, and to attain the desired stream function.

Reclamation bonds are adequate to ensure long-term chemical and physical stability and successful re-vegetation of disturbed areas and mine waste facilities.

Standard 20: Sand and gravel mining and extraction within RCAs are prohibited (MM 5**).**

Standard 21: Provide and maintain fish passage at new, replacement, and reconstructed road crossings of existing and potential fish-bearing streams, unless barriers are determined beneficial for native fish and/or sensitive aquatic species conservation (RF 5**).**

Standard 22: Complete watershed analysis prior to constructing roads or landings in RCAs within fish or restoration key watersheds (RF 2a).

Standard 23: Where adjustments of recreation use impacts on desired stream function are not successful terminate activity or occupancy (RM 1).

Standard 24: Chemical pesticides and toxicants will be applied in a manner consistent with desired stream function and avoids adverse biological effects (RA 3**).**

Standard 25: Project related storage of fuels and toxicants within Riparian Conservation Areas is prohibited. Refueling within Riparian Conservation Areas is prohibited except for emergency situations, in which case refueling sites must have an approved spill containment plan (RA 4).

Standard 26: Fuelwood cutting and salvage in RCAs will not prevent or retard attainment of desired stream function (TM 1a).

Standard 27: Vegetation and/or fuel management prescriptions in RCAs will be for the purpose of restoring, enhancing, or protecting the physical and biological characteristics of the RCA including Riparian Management Objectives. Vegetation and/or fuel treatments, for the purpose of protecting urban interface, private property and other investment, and public safety in RCA's shall be designed so as not to prevent the attainment of desired stream function (TM 1).

Standard 28: Complete the evaluation of on-going activities in Fish Key Watersheds. Activities or conditions inconsistent with goals and objectives will be identified within 3 years and timeframes for implementation of mitigation will be identified.

ECONOMICS AND SOCIAL VALUES

Goals

Economy Contribution: Contribute to the social and economic well-being of local communities by promoting sustainable use of renewable natural resources. Provide timber for commercial harvest, forage for livestock grazing, exploration and development opportunities for mineral resources, and recreation settings consistent with other resource goals.

Coordination: Increase coordination with federal, state, county and tribal governments and strive for coordination and dialogue with a broad range of stakeholders.

Economic Efficiency: The best available methods are used to contribute products to local communities while maximizing the ability to achieve Forest targets.

Objective

None

Standards

None

FIRE MANAGEMENT

Goals

Safety: Fire fighter and public safety is always recognized as the first priority for fire suppression.

Wildland Fire Response: The full range of responses to wildland fire is available to meet social needs and to achieve ecosystem sustainability.

Fuels Management: A full range of fuels management activities is available to achieve ecosystem sustainability, including, economic, and social components.

Wildfire Hazard Reduction: Effects of unplanned and unwanted wildfire are reduced by moving areas of condition class 2 and 3 to a condition class 1 for all fire regimes and by maintaining areas in condition class 1.

Objectives

Wildland Urban Interface: Reduce the risk from wildfire to communities and resources in the following order of priority:

1. Areas where a community wildfire protection plan has been developed.
2. High risk areas adjacent to communities, for example: condition classes 2 and 3 in fire regimes 1, 2, & 3.
3. Areas in condition class 2 and 3 in fire regimes 4 & 5.
4. Areas to be maintained in condition class 1.

Standards

Standard 1: Wildland fire use plans shall be developed in coordination with the appropriate county, state, tribal, and other federal agencies.

Standard 2: Wildland fire use is an available tool for all unplanned ignitions.

HERITAGE RESOURCES

Goals

Heritage Resources: There is no loss of significant heritage resources. Significant means listed in the National Register of Historic Places, eligible for listing, or awaiting formal evaluation for National Register eligibility.

Heritage Program: A heritage program is developed and maintained that includes legal compliance, preservation, interpretation, public education, scientific research, partnerships, and tribal consultation.

Objectives

Historic Preservation Plan: Write historic preservation plans for every heritage property listed in the National Register of Historic Places within one year of listing. Other heritage sites, districts and cultural landscapes will be managed through heritage preservation plans as necessary.

Heritage Assessment: Complete an assessment of heritage resources with conclusions and priorities for inventory, protection, stabilization, and enhancement.

Heritage Management Strategy: Develop and update as needed, a forestwide heritage management strategy that includes programs to identify and evaluate sites; prioritized lists of sites needing treatment; treatment plans for those sites; appropriate uses for sites; and implementation strategies. Integrate the strategy into other resource assessments, interpretive plans, and recreation plans. Develop the strategy in partnership with all interested parties including the Montana State Historic Preservation Office (SHPO), tribes, local history and archaeological societies, universities, rural economic development councils, etc. Develop partnership agreements with interested parties, to assist in implementing the strategy and document the management strategy in prehistoric and historic overviews.

Standards

Standard 1: Heritage resources determined eligible for listing in the National Register of Historic Places will be preserved in place, or a consensus determination of "no adverse effect" will be reached with the Montana SHPO, the Advisory Council on Historic Preservation, and appropriate Indian tribes.

Standard 2: Unplanned discoveries of heritage resources during project implementation shall cause project operations in the area of the discovery to cease until analysis and evaluation of the heritage resources are completed, including consultation with the Montana SHPO and appropriate Indian tribes.

Standard 3: Heritage protection measures will be added to all appropriate contracts, sales documents, and special use permits.

INFRASTRUCTURE

Goals

Transportation System: The minimum transportation system necessary is identified and managed. Roads and trails are identified in the transportation atlas maintained at the Forest Supervisor's Office. Roads and trails are constructed, managed, and maintained to meet land and resource objectives.

Facilities: Administrative and/or recreation facilities are constructed, managed, and maintained to meet land and resource objectives and address recreation demand.

Objective

Recreation Facilities: Monitor use and reconstruct sites as needed, construct additional recreation facilities to meet demand, and convert existing sites to dispersed use areas if warranted. Reconstruct 30% of existing developed sites.

Standards

Standard 1: Facility Design: Use the Rocky Mountain and Great Plains sections of the Built Environment Image Guide, (USDA FS-710, Dec. 2001), or equivalent for development of recreation sites, administrative sites, and approval of special use structures and facility design.

LANDS

Goals

Conservation Easements: Conservation easements are acquired where appropriate to protect important habitat or viewsheds.

Land Adjustments: Land ownership adjustments are pursued as opportunities arise, to improve national forest management through purchase, exchange, or other authority.

Property Lines: National Forest System property lines adjacent to private lands and boundaries of special areas such as the National Wilderness Preservation System are clearly marked where encroachment is likely.

Right-of-way: Existing public access to National Forest System lands would be maintained and additional access would be provided by acquisition of new road or trail rights-of-ways. Rights-of-ways are acquired to national trails or historic routes, special recreation areas, or other tracts of the National Forest System lands where public access does not exist.

Utility Corridors and Communication Sites – A network of designated utility corridors and communication sites is provided to minimize the proliferation of rights-of-way, facilities, and corridors across the landscape. Designation of a corridor does not constitute approval of any particular project.

Objectives

None

Standards

Standard 1: Energy transmission facilities shall be located only in designated utility corridors shown on the Utility Corridor and Communication Site map at the end of Chapter 3. Energy gathering or distribution facilities may be located outside of designated corridors.

Standard 2: Wireless telecommunication facilities shall be located in designated communication sites and utility corridors shown on the Utility Corridor and Communication Site map. Exceptions may be made for non-ground disturbing temporary facilities that are in place for less than one year.

Standard 3: Comply with direction in USDA Forest Service Designation of Section 368 Energy Corridors on National Forest System Land in 10 Western States Decision by Secretary of Agriculture To Amend Land Management Plans Described as the Environmentally Preferred Alternative January 14, 2009.

LIVESTOCK GRAZING

Goals

Grazing Opportunities: Sustainable grazing opportunities are provided for domestic livestock from lands suitable for forage production.

Forage Use: Use of forage by domestic livestock will maintain or enhance the desired structure and diversity of plant communities on grasslands, shrub lands, and forests. Use will be managed to maintain or restore riparian function as defined in the allotment management plan.

Objectives

None

Standards

Standards 1: The interim standards in Table 6 apply to livestock grazing operations unless or until specific long-term objectives, prescriptions, or allowable use levels have been designed through individual resource management plans or site-specific NEPA decisions; for example, revised allotment management plans or Wilderness management plans.

These interim standards are designed to prevent reduction of existing water quality or physical or biological functions of riparian-wetland areas from management activities. The standards are a means to assure use remains at levels which maintain existing riparian-wetland function. The maximum utilization, minimum stubble height or minimum streambank standards may be incorporated in livestock annual operating plans. In streams containing 90% or greater, genetically pure westslope cutthroat trout (or other genetic purity requirement as defined by Montana State Westslope Cutthroat Trout Conservation Strategy or Federal Recovery Plan), managers must use the interim standard for WCT in Table 6. Interim standards apply to the following situations:

- Any allotment management plan lacking riparian management objectives and guides designed specifically for that allotment.
- Any riparian recreation site used primarily by recreation stock.
- Any outfitter operation where stock are grazed in a riparian area that lacks a specific riparian grazing strategy in the annual operating plan.

Table 6. Interim Livestock Grazing Standards

Category	**Season Long or Continuous**	**Deferred or Rest-Rotation**	**Area**	**Key Species *(others may be used for specific allotments)***
Upland range utilization	≤ 40% of forage utilized on suitable range on 85% of the area. ≤ 50% utilization on the remaining 15%.	≤ 55% of forage utilized on suitable range on 85% of the area. ≤ 65% utilization on remaining 15%.	Suitable range.	Idaho fescue Bluebunch-wheatgrass Rough Fescue
Streambank Disturbance	≤ 25% streambank disturbance measured by reach.	≤ 30% streambank disturbance measured by reach.	85% of riparian habitat, by stream reach, within suitable range for each pasture. 5% of riparian habitat could exceed standards on a repeat basis (crossings).	n/a
Riparian Stubble Height	Green Line ≥ 6” measured by reach, flood plain ≥ 4” measured by reach.	Green Line ≥ 4” measured by reach, flood plain ≥ 3” measured by reach.	85% of riparian habitat, by stream reach, within suitable range for each pasture.	Sedges, rushes Bluejoint reedgrass Tufted hairgrass.
Winter Range	N/A	≤ 35% of forage utilized on suitable range on 85% of the area. Allow no more than 55% utilization on remaining 15%. Exceptions can be made if a rest pasture is available to provide winter forage.	Pastures in big game winter range as mapped in July 2006.	Idaho fescue Bluebunch - wheatgrass Rough Fescue
Riparian Sites on Streams that Contain West-slope Cutthroat Trout or listed species	≤ 20% streambank disturbance by reach.	≤ 45% of forage utilized on suitable range on 85% of the area. Allow no more than 65% utilization on remaining 15%.	85% of riparian habitat, by stream reach, within suitable range for each pasture. 5% of riparian habitat could exceed standards on a repeat basis (crossings).	Sedges, rushes, Bluejoint reedgrass, Tufted hairgrass.

Standard 2: Domestic livestock grazing will not be allowed in developed recreation sites unless specifically permitted.

Standard 3: Allotment management plans will identify specific criteria for special areas, such as wet meadows, where limiting grazing at certain times of the years or under certain conditions is necessary to protect resources.

Standard 4: Base Property Requirement - ownership of facilities and land capable of producing feed for livestock 50% of the time permitted livestock are not grazing on National Forest, will be demonstrated before issuing grazing permits.

MINERALS, OIL, AND GAS

Goals

Hardrock and Saleable Minerals: Mineral commodities are explored and developed in accordance with national direction.

Locatable Minerals: Locatable minerals are developed on all parts of the Forest not withdrawn from locatable mineral entry in accordance with the 1972 Mining Law, regulations, and national direction.

Oil and Gas Leasing: Offer oil and gas leasing opportunities under stipulations which protect resource values.

Objectives

None

Standards

Standard 1: Use the following table to describe the lease terms and prescribe stipulations for the Beaverhead Unit. Appendix B contains detailed language.

Table 7. Lease Terms and Prescribed Stipulations for the Beaverhead Unit. Corresponding lease stipulation map layers are available in the Beaverhead Unit GIS database

Affected Environment	Stipulation
Special Designations	
Wilderness	LU
Recommended Wilderness	LU
West Pioneer WSA	LU
Maverick Ski Area	LU
Eligible Wild segments of Eligible Wild & Scenic Rivers – ¼ mile buffer	AU
Research Natural Areas	NSO
Eligible Scenic & Recreation segments of Wild & Scenic Rivers – ¼ mile buffer	CSU
Inventoried Roadless Areas	CSU
TES and Wildlife	
Big Game Winter Range (12/2 – 5/15)	TL
Trumpeter Swan Nesting Areas (4/1 – 9/1)	TL

Affected Environment	Stipulation
Bald Eagle & Peregrine Falcon Nesting Areas (2/1 – 9/1)	NSO/TL
Occupied Grizzly Bear Habitat	CSU
Westslope Cutthroat Trout Conservation Populations	CSU
Westslope Cutthroat Trout in Fish Key Watersheds	NSO
Arctic Grayling Recovery Sites	CSU
Soil and Water Quality	
Slopes over 60%	NSO
Areas of Mass Failure	NSO
Areas prone to failure, slopes over 35%	NSO
Areas sensitive to soil compaction	CSU
Recreation and Aesthetics	
Heritage Resource Sites and Traditional Cultural Properties	NSO
Grasshopper and Rock Creek Recreation Areas	CSU
Special Use Recreation Residences – ¼ mi. buffer	CSU
Administrative Sites – ½ mi. buffer	NSO
Developed Campgrounds – ½ mi. buffer	NSO
Continental Divide National Scenic Trail – ¼ mi. buffer	NSO
National Historic Trails: Nez Perce and Lewis & Clark - ½ mi. buffer	NSO
Specific Semi-Primitive Recreation Areas	CSU
Areas of High Scenic Value	NSO
Areas of Moderate Scenic Value	CSU
Other Resources	
All other Available Lands	ST

Leasing Options

(ST) Standard Terms - provisions issued with all leases. Operations must comply with applicable laws, regulations, and Onshore Orders. Two key features of ST provide the federal surface management agency the ability to delay initial operations up to 60 days and/or to relocate a proposed drill site up to 200 meters at its discretion. The area encompassed within a circle having a radius of 200 meters is approximately 31 acres.

(TL) Timing Limitation – exploration and construction activities would be restricted or prohibited during certain time periods.

(CSU) Controlled Surface Use – use and occupancy is allowed, but restricted to mitigate effects to a particular resource, such as requirements to meet a visual quality objective.

(NSO) No Surface Occupancy – allows lands to be leased, but well sites, tank, batteries, or similar facilities would not be allowed to occupy the surface of specified lands. Roads would not be constructed in large blocks of land specified for No Surface Occupancy to provide access to leases, which allowed surface occupancy. An example would be no roads allowed in a Research Natural Area having a NSO stipulation in order to access an adjacent lease. However, roads may be authorized for construction across a segment of a linear strip of land specified NSO. Or an instance where it is necessary to construct an access road across a stream stipulated for NSO on a long linear strip of High Scenic Value. .

(LU) Legally unavailable

(AU) Administratively unavailable

Standard 2: Any new road constructed for oil and gas activity will be obliterated unless the road is needed as part of the Forest Service permanent transportation system.

Standard 3: All drill pads will be obliterated.

RECREATION AND TRAVEL MANAGEMENT

Goals

Recreation Settings: Offer a choice of recreation settings ranging from remote backcountry to more developed front country areas. Recreation allocations use Recreation Opportunity Spectrum (ROS) concepts and definitions, (Tables 8 and 9). The allocations are mapped beginning on page 54 and are described below.

Designated Wilderness: Provide primitive and semi-primitive non-motorized settings, and offer opportunities for foot, stock, ski, snowshoe travel, dispersed camping, and other activities allowed in Wilderness.

Recommended Wilderness: Provide semi-primitive non-motorized settings and offer opportunities for foot, stock, ski, snowshoe travel, dispersed camping, and other activities.

Recommended Wilderness: Areas allocated as recommended Wilderness are managed to protect or improve their Wilderness character and to protect the area's potential for inclusion in the NWPS as described in Section 2(c) of the Wilderness Act.

Wilderness Study Areas: Wilderness Study Areas (WSA) are managed to protect Wilderness character according to the Montana Wilderness Study Act of 1977.

> **WSA Summer:** Provide semi-primitive non-motorized and semi-primitive motorized settings, and offer opportunities for wheeled motorized travel on routes as shown on the travel plan.
>
> **WSA Winter:** Provide semi-primitive motorized settings and offer opportunities for snowmobiling December 2 through May 15.
>
> **WSA Winter Non-Motorized:** Provide primitive non-motorized settings December 2 through May 15.

Summer Non-Motorized Allocations: Provide semi-primitive non-motorized recreation settings, and offer opportunities for mountain biking, horse and stock travel, hiking, dispersed camping, and other activities.

Summer Motorized Backcountry Allocations: Provide semi-primitive motorized recreation settings, and offer opportunities for varied types of travel and recreational activities.

Summer Roaded Allocation: Provide roaded natural and rural recreation settings, and offer a wide variety of opportunities for dispersed and developed recreational activities.

Winter Non-Motorized Allocations: Provide primitive and semi-primitive non-motorized recreation settings in these areas, and offer opportunities for ski touring, snowshoeing, and hiking, and other non-motorized activities.

Winter Motorized Allocations: Provide roaded and semi-primitive motorized recreation settings in these areas, and offer opportunities for a variety of motorized and non-motorized travel and activities. The majority of these allocations provide opportunities for travel by snowmobile.

Table 8. Activities Available in Summer Management Allocations

Designated Wilderness	Recommended Wilderness	Summer Non-motorized	Wilderness Study Area	Backcountry	Road Based
					Motorized watercraft
					Camping in campgrounds
					Scenic driving
					Four-wheeling (full-size) on roads
					ATV & motorcycle riding on trails
					Mountain Biking
Stock use, hiking					
Mineral Collection					
Dispersed camping					
Hunting and Fishing					
Non-motorized watercraft					

Table 9. Activities Available in Winter Management Allocations

Designated Wilderness	Recommended Wilderness	Winter Non-motorized	Wilderness Study Areas	Motorized Recreation
				Winter sport resorts
				scenic driving
				Four-wheeling (full-size highway vehicles) on roads
				ATVs, motorcycles and other trail vehicles
				Snowmobiles,
Cross-country skiing, ski touring skiing, snow-shoeing, winter hiking				
Dog sledding				
Trapping, hunting, fishing				

Recreation Opportunities: High quality diverse outdoor recreation opportunities are provided, including but not limited to:

- Day use activities within a 30 minute drive of communities for motorized and non-motorized trails, picnicking and interpretive sites,
- Winter use areas near communities for ski touring, snowshoeing and snowmobiling,

- Trails and routes for autos, four-wheel-drive vehicles, ATVs, motorcycles, mountain bikes, horses, and hikers to high mountain lakes and other features, and
- Developed and dispersed camping.

Road and Trail Use: A system of routes and areas designated for non-motorized and motorized use are identified and available for public use. A Roaded or Backcountry recreation allocation does not determine the motorized status of any route, including the CDNST, within those allocations. A non-motorized recreation allocation (Summer Non-Motorized, Recommended Wilderness, or designated Wilderness) does close all routes within the area to motorized use.

Resources are protected and user conflicts are minimized by allowing motorized wheeled travel only on designated routes and areas. Established routes to dispersed campsites are recognized as part of the Forest transportation system. A system of trails designated for non-motorized uses are also identified and available for public use.

Developed Sites: High quality developed recreation facilities are strategically located to concentrate use, provide access to backcountry settings, and protect natural resources. Sites are clean, well maintained, and designed for universal accessibility.

Commercial Recreation: Permitted guiding, outfitting, and resort operations enhance visitor access and enjoyment, help achieve forest management objectives and contribute to regional and local economies.

Objectives

Non-motorized winter activities: Increase opportunities for non-motorized winter activities, such as ski touring and snowshoeing, where highway access points and parking are available.

Dispersed Sites: Identify dispersed campsites causing adverse resource impacts. Develop mitigation or relocate the site to protect the resource. Actions may include but are not limited to installing toilets for public health, bulletin boards, or hardening sites where necessary. Close campsites where unacceptable resource damage cannot be mitigated.

Developed Recreation Sites: Complete mineral withdrawals for all developed recreation sites.

Trails – Maintain motorized and non-motorized trails to standard. Reconstruct trails that do not meet standards based on the following Region One priorities:

a. Safety hazards to users

b. Actual or potential resource damage, especially in key watersheds,

c. Level of use

Standards

Standard 1: Permanent road construction is not allowed in summer non-motorized allocations or in areas evaluated for wilderness potential.

Standard 2: Motorized vehicles are not allowed in summer or winter non-motorized allocations except for permitted or administrative use.

Standard 3: Restrict year-round, wheeled motorized travel to designated routes or areas.

Where routes have not been designated through site specific travel planning, restrict motorized vehicles to open motorized routes identified on the Forest Plan Interim Roads and Trails Inventory GIS Layer displayed on page 53. Motorized wheeled travel on routes leading to identified dispersed campsites is allowed. Exceptions may be authorized for:

Motorized wheeled cross-country travel for any military, fire, search and rescue, or law enforcement vehicle used for emergency purposes.

Authorized motorized wheeled cross-country travel is limited to official administrative duties or emergency services such as, fire suppression, prescribed fire, noxious weed control, vegetation restoration, surveying, and law enforcement.

Motorized wheeled cross-country travel for other government entities on official administrative business as authorized through the normal permit processes or a memorandum of understanding.

Motorized wheeled cross-country travel for lessees and permittees limited to terms described in the federal lease or permit.

Standard 4: Extreme sport courses such as motocross trails, technical mountain bike courses, and motor vehicle challenge routes will not be constructed.

Standard 5: New outfitter and guide permits or increases in existing permits, will be only be made based on need, administrative capability, and a suitable mix of guided and non-guided public capacity determined by a forestwide capacity study. This mix may vary by type of activity and/or season of use. Capacity validation will be made on an area-specific basis when the general forestwide capacity determination does not adequately address the management situation. Heli-skiing operations will not be permitted.

Standard 6: New recreation resorts or residence tracts will not be permitted, nor will permits be issued for unoccupied tracts or lots.

Standard 7: Manage summer non-motorized allocations for either a primitive or semi-primitive non-motorized setting from May 16 thru December 1, (page 54).

Standard 8: Manage winter non-motorized allocations for a primitive or semi-primitive non-motorized setting from December 2 thru May 15, (page 55).

Standard: 9: Manage summer backcountry allocations for a semi-primitive motorized setting from May 16 thru December 1, (page 54).

Standard 10: Manage recommended Wilderness for primitive or semi-primitive non-motorized settings and protect Wilderness character.

Standard 11: Commercial timber harvest is prohibited in recommended Wilderness.

Standard 12: Road construction is not permitted in recommended Wilderness.

Standard 13: Wheeled or motorized vehicles designed for the primary purpose of transporting people, except for wheel chairs, are prohibited in recommended Wilderness except for permitted or administrative uses.

SCENIC RESOURCES

Goals

Scenery Management: Scenic resources reflect ecosystem diversity, enhance the recreation settings, and contribute to the quality of life of local residents and communities.

Objectives

Scenic Integrity Objectives (SIOs): Map forestwide SIOs within one year.

Scenic Integrity: Identify and rehabilitate areas that do not meet the SIOs.

Standards

Standard 1: Where no minimum SIOs are identified by landscape or management area - prior to the completion of a forestwide scenic integrity map – the objectives for scenery shall be determined by procedures outlined in the Landscape Aesthetics Handbook, Agricultural Handbook No. 701. The analysis shall use the Scenic Concern Level List in Appendix A, Scenic Attractiveness GIS layer, and the Scenery Integrity Level Matrix below.

Table 10. Scenery Integrity Level Matrix

Scenic Attractiveness	**Landscape Visibility**				
	Middle or Foreground of Concern Level 1	Background of Concern Level 1	Middle or Foreground of Concern Level 2	Background of Concern Level 2	All Other Areas
A - Distinctive	High	High	Moderate	Moderate	Low SIO, or determine a higher SIO if it supports summer ROS
B - Typical	High	Moderate	Moderate	Low	
C -Indistinctive	Moderate	Moderate	Moderate	Low	

Standard 2: Projects in non-motorized and summer backcountry allocations will be designed to meet a minimum SIO of Moderate. Use the Scenic Concern Level List in Appendix A, Forestwide Scenic Attractiveness GIS layer, and Scenic Integrity Level Matrix above to determine a site specific SIO. Project-level analysis may determine a higher SIO to be appropriate.

Standard 3: Projects in foreground areas of scenic byways, national scenic trails or wild and scenic rivers will be designed to meet the SIO of at least High.

SOILS

Goals

Soil Productivity: Soil productivity is maintained or restored.

Objectives

Soil Productivity: Protect soil productivity through site-specific prescriptions. The objective would be achieved by applying the most current soil and water conservation practices and other appropriate mitigation measures identified during project analysis and design, in order to meet the most current Region 1 Soil Quality Standards and riparian area standards.

Standards

Standard 1: The most current Region 1 Soil Quality Standards are adopted as forest plan soil standards.

Standard 2: Ground based yarding shall not be allowed on slopes exceeding 35% without site-specific environmental analysis that shows damage is unlikely and soil goals and objectives can be met.

SPECIAL DESIGNATIONS

In addition to goals, objectives, and standards below, direction for specific special designations reside in the respective management plans for each designation or in Forest Service manuals.

Goals

Special Designations: Recreational opportunities are featured and improved in special designations except research natural areas.

Anaconda-Pintler Wilderness: This area is managed to protect Wilderness character as defined in the Wilderness Act as outlined in the Anaconda-Pintler Wilderness Management Plan.

Continental Divide National Scenic Trail: The Continental Divide National Scenic Trail is managed according to the National Trails Act, the CDNST Study Reports and FEIS, and CDNST Comprehensive Plan (as amended) for the purpose of providing:

- "A continuous, appealing trail route, designed for the hiker and horseman, but compatible with other land uses."
- Access for hikers and stock into the diverse country along the Continental Divide in a manner which will assure a high quality recreation experience while maintaining a constant respect for the natural environment.

- Exception for motorized use is outlined in the National Trails Act.

Lee Metcalf Wilderness: This area is managed to protect Wilderness character as defined in the Wilderness Act as outlined in the Lee Metcalf Wilderness Management Plan.

Lemhi Pass National Historic Landmark: The landmark is managed to provide recreation opportunities while protecting historic features and historic landscape character as outlined in the Lemhi Pass National Historic Landmark Management Plan.

Lewis and Clark National Historic Trail: The Lewis and Clark National Historic Trail and its related sites are managed according to the LCNHT Comprehensive Management Plan.

National Recreation Trails: National Recreation Trails are managed to protect or enhance the values for which they were established.

May Creek National Recreation Trail - a non-motorized route from May Creek Campground to the Continental Divide National Scenic Trail.

Pioneer Loop National Recreation Trail - a 32 mile loop trail through the West Pioneers.

Wise River Polaris National Recreation Trail - the Pioneer Mountains Scenic Byway as a 30 mile snowmobile route in winter.

Grasshopper Loop National Recreation Trail - a three mile trail in the southern part of the Pioneers, with non-motorized trail opportunities yearlong.

Haystack National Recreation Trail - a three mile hike with a 2000 ft elevation gain to the top of Haystack Mountain for outstanding views of the area.

Lodgepole National Recreation Trail - a three mile loop trail through varied mountain vegetation types north of Georgetown Lake, with summer OHV and winter cross-country ski opportunities.

Louise Lake National Recreation Trail - a one mile trail near the end of the South Boulder Road in the Tobacco Root Range to this lake basin near the top of the range.

Lost Cabin Lake National Recreation Trail - a three mile trail near the end of the South Boulder Road in the Tobacco Root Range to this high mountain lake.

Nez Perce National Historic Trail managed according to the NPNHT Comprehensive Plan.

Pioneer Mountains Scenic Byway: The byway is managed to provide scenic driving, camping and day use along its length, and access to backcountry opportunities in the Pioneer**:** The Nez Perce National Historic Trail (NPNHT) is Mountains.

Research Natural Areas and Special Interest Areas: Research natural areas (RNAs) and special interest areas (SIAs) are managed to protect the primary features for which they were identified. The Northern Region Status and Needs Assessment for Research Natural Areas of October 1996 has assigned communities and or habitat types to each national forest in Region 1 so the entire range of vegetative types in the Northern region is represented by one or more RNAs. The areas in the following table meet one or more of the assigned

communities, habitat types, or other feature assigned to the Beaverhead-Deerlodge National Forest.

Table 11. Research Natural and Special Interest Area Descriptions

Research Natural Area	Acres	District	Designated	Primary Features
Skull-Odell	2543	Wise River	1996	Subalpine forest, lakes, bog meadows and cold springs
Horse Prairie	196	Dillon	1996	Sagebrush, Idaho fescue and willow communities, Type 2 streams
Dry Mountain	507	Jefferson	1996	Douglas-fir, common juniper, sagebrush, bunchgrasses
Lost Park	618	Jefferson	1996	Subalpine forest, willow, herbaceous wetlands and Idaho fescue and bluebunch wheatgrass
Bernice Experimental Forest	451	Jefferson	1996	Douglas-fir / subalpine forest, Douglas-fir, twinflower, and grasslands
Thunderbolt Mountain	792	Jefferson	1996	Subalpine forest, whitebark pine, wetlands
Basin Creek	1014	Butte	1996	Subalpine forest, riparian, and herbaceous type, and spruce.
Windy Ridge	235	Pintler	1996	Rare plants, grasslands
Dexter Basin	1109	Pintler	1996	Whitebark pine, alpine larch, subalpine fir/woodrush, and forested scree.
Sapphire Divide	1399	Pintler	1996	Alpine larch, whitebark pine, pond
Goat Flats	1287	Pintler, Wise River	2001	Rare plants, alpine tundra, subalpine larch, whitebark pine
Cave Mountain	4513	Madison	1996	Idaho fescue grassland, geography, and wildlife
Cliff Lake	2301	Madison	1951	Grassland and shrublands
Cottonwood Creek	128	Madison	1972	Grasslands and shrublands, sagebrush and Idaho fescue
Cattle Gulch	2162	Wise River	2009	Mountain Mahogany, bluebunch wheatgrass, and rare plants
Elkhorn Lake	1765	Wise River	2009	Subalpine forest, whitebark pine/grouse whortleberry, and subalpine lake
Special Interest Area				
West Fork Butte	486	Pintler	1996	Rare plants, grasslands

Thompson Park Municipal Recreation Area: This recreation area is managed in cooperation with the Butte-Silverbow city-county government to provide outdoor recreation opportunities for the Butte municipal area.

Unique Features: Habitats or features such as caves and thermal springs are managed to protect or maintain their natural condition or biological values.

Wild and Scenic Rivers: Stream segments, determined to be eligible for classification under the Wild and Scenic Rivers Act of 1986, as amended, are protected until suitability studies are completed.

Table 12. Beaverhead-Deerlodge National Forest Eligible Stream Segments

Segment	Outstandingly Remarkable Values(s)	Potential Classification	Length in Miles	District
Browns Canyon	Genetically pure westslope cutthroat trout	Wild	4.3	Dillon
Deadman Creek	Recreation and wildlife values, and a National Historic Register Site	Wild	10.2	Dillon
Canyon Creek	Geologic, recreation and wildlife values, and a stream dependent historic site	Wild Recreational	4.6 6.4	Wise River
Wise River	Recreational and scenic values	Recreational	13.6	Wise River
Warm Springs Creek	Geologic Feature	Recreational	5.2	Madison
Mill Creek	Stream dependent National Historic Register site.	Recreational	8.0	Madison
West Fork of Madison River	Fish recruitment to Madison River	Wild Scenic Recreational	8.2 7.4 6.5	Madison
Elk River	Fish recruitment to Madison River	Wild Scenic	9.2 5.2	Madison
Rock Cr. between Gilles Bridge and Lolo National Forest boundary.	Nationally recognized Class One Trout Stream	Recreational	7.25	Pintler

Wilderness Study Areas: Wilderness Study Areas are managed to protect Wilderness character according to the Montana Wilderness Study Act of 1977.

Objective

Caves: Complete an inventory and determination of significance for the Garrity Cave.

Continental Divide National Scenic Trail: Complete the Continental Divide National Scenic Trail by 2013, with new segments designated as non-motorized. Convert existing motorized segments to non-motorized as opportunities arise to convert, reroute, or replace segments.

Lee Metcalf Wilderness: Revise the Wilderness Plan.

Wild & Scenic Rivers: Complete suitability studies for the nine wild and scenic rivers.

Standards

Standard 1: Research Natural Areas or Special Interest Areas will be managed in accordance with their individual management plans in addition to the regulations (36 CFR 251.23), and the policy (FSM 4063 and 2370) pertaining to these areas.

Standard 2: Streams determined to be Eligible for protection under the Wild and Scenic Rivers Act will be protected to maintain Outstandingly Remarkable Values. Standards for protection are provided in Forest Service Manual 1909.12.8.2.

TIMBER MANAGEMENT

Goals

Lands Suitable for Timber Production: Manage lands suitable for timber production for the growth and yield of sawtimber, crop trees, pulpwood, and other forest products, including salvage harvest.

Of the remaining lands:

Lands Not Suitable for Timber Production but Timber Harvest is Permitted to Meet Other Resource Objectives: Manage lands where timber harvest is allowed to protect other resource values. Resource objectives may include, but are not limited to, protection of wildland urban interface, protection of improvements, aquatic system restoration, fuel reduction, wildlife habitat enhancement, fisheries habitat enhancement, range improvement, and grass and shrub land maintenance.

Salvage activities are allowed on these lands.

The type, size, and extent of harvest will be determined through site specific analysis.

Multiple products would be provided from these lands, including but not limited to, sawlogs, pulpwood, post, poles, and fuel wood through appropriate silvicultural practices.

The rest are:

Lands Where Timber Harvest is Not Allowed: Manage lands where timber harvest is not allowed, where no exception for timber harvest has been identified to protect resource values.

Product Utilization: Forest products would be used to provide economic benefits where project objectives, forest plan objectives, and forest plan standards can be met.

Objectives

Lands Suitable for Timber Production:

- Bring 10% of lands suitable for timber production into a managed condition.
- Manage those stands already in a managed condition to maintain long term sustained yield.

Standards

Standard 1: On lands suitable for timber production, even aged harvest may occur only upon a finding that it is the appropriate and optimum method for the timber type and will contribute to meeting vegetative objectives for the site. Such harvest must be consistent with the protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources. Harvest areas shall be blended to the extent practicable with the natural terrain.

Standard 2: On lands suitable for timber production, the maximum size of openings created by one regeneration harvest operation shall not exceed 40 acres. Exceptions can be made where a natural event, such as fire, insect, disease, or windthrow created an undesirable opening. A regeneration harvest larger than 40 acres may be allowed after public notice, and review and approval by the officer one level above the responsible official. This only applies to harvest on suitable timber lands for timber production activities.

Standard 3: On lands suitable for timber production, even aged management regeneration harvest shall not occur unless the stand has reached the culmination of mean annual increment. An exception occurs where the primary purpose of treatment is for wildlife enhancement, visual enhancement, riparian area improvement or public safety or protection of property. The culmination of mean annual increment of growth requirement does not apply to cutting for experimental or research purposes; to non-regeneration harvests, such as thinning or other stand improvement measure; to management of uneven aged stands or to stands under uneven aged silvicultural system; and to salvage or sanitation harvesting of timber stands which are substantially damaged by events such as fire, insects, disease or windthrow. This only applies to harvest on suitable timber lands for timber production activities.

Standard 4: Replace natural barriers to livestock movement removed by harvest activities with some other barrier.

Standard 5: When trees are cut to achieve timber production objectives the cuttings shall be made in such a way as to assure that the technology and knowledge exists to adequately restock the lands.

Standard 6: The following Timber Harvest Classification Protocol establishes where timber harvest is not allowed and where timber harvest is permitted to meet other resource objectives.

Timber Harvest Classification Protocol

Lands Where Timber Harvest Is Not Allowed (Step One)

(Not suitable, not harvestable).

Lands where timber harvest is not allowed are those acres identified as Beaverhead-Deerlodge National Forest System lands that meet the following criteria:

1. Nonforested lands: [36 CFR 219.14(a)(1) and FSH 2409.13, 21.1]

a. Lands that do not currently have and have never had 10% or greater tree cover

b. Roads, railroads (16 foot buffer, 33 foot corridor)

2. Irreversible soil, slope, watershed conditions [36 CFR 219.14(a)(2) and FSH 2409.13, 21.41] (not modeled – site specific)

   a. Wetlands

   b. Landslide prone / high water table lands

3. Areas withdrawn from timber harvest by Congress, Secretary of Agriculture, or Chief of the Forest Service [36 CFR 219.14(a)(4) and FSH 2409.13, 21.2]

   a. Wilderness (Anaconda-Pintler MA, Lee Metcalf MA)

   b. Wilderness Study Areas (West Pioneer WSA MA, Sapphires WSA MA)

   c. Research Natural Areas

4. Areas withdrawn from timber harvest by Regional Forester / Forest Plan Decision, by Management Area:

   Anaconda-Pintler Recommended Wilderness Additions
   Lee-Metcalf Recommended Wilderness Additions
   Centennial Recommended Wilderness
   Torrey Mountain Recommended Wilderness
   West Big Hole Management Area
   Garfield Mountain Recommended Wilderness
   Mount Jefferson Recommended Wilderness
   Italian Peak Recommended Wilderness
   Quigg Recommended Wilderness
   Snowcrest Recommended Wilderness
   Stony Mountain Recommended Wilderness
   Table Mountain Recommended Wilderness
   Electric Peak Recommended Wilderness

5. ½ mile Eligible Wild River corridors (¼ mile buffer)

The remaining lands are used as a starting point for further classification.

Lands Not Suitable for Timber Production but Timber Harvest is Permitted to Meet other Resource Objectives (Step Two)

Lands where timber harvest is allowed are those acres not identified in the previous category that meet any of the following criteria.

1. Lands not capable of producing industrial wood [FSH 2409.13, 21.2]

   20 cubic ft/ac/yr used as cut-off

2. Lands where restocking within 5 years is not assured [36 CFR 219.14(a)(3) and FSH 2409.13, 21.42]

3. Lands with inadequate response information [FSH 2409.13, 21.5]

   Whitebark Pine cover type

4. Riparian Conservation Areas – 300 feet from perennial streams and 150 feet from intermittent streams
5. Municipal Watersheds (exception of Big Hole 4th Code and Basin Creek 6th Code HUCs)

Basin Creek South	South Boulder
Fish Creek	South Fork Divide Reservoir
Fred Burr Creek	Tin Cup Joe
Indian Creek	Yankee Doodle Creek
Rattlesnake	

6. Summer Non-motorized Allocations
7. Key Watersheds
8. Visual Quality / Recreation Areas
    a. By Management Area

Georgetown Lake	Mill Creek Corridor
I-15 Corridor	Pioneer Mountains Scenic Byway

    b. By other Definition
        i. 6th code HUCs (Montana NRIS 2003 Version Watersheds)
            - 100200041304 Trapper
            - 100200041305 Cherry Pioneers
            - 100200041307 Brownes* (sic)
            - 100200041308 Rock-Pioneers
            - 100200041403 Birch
        ii. ½ Mile Corridors (¼ mile buffer)
            - National Trails
            - Highways 1, 2, 43, 45, 278, and I-90
            - Eligible Scenic & Recreation Rivers
        iii. ½ Mile buffer around Delmoe Lake
        iv. 300 foot buffer around developed recreation sites
        v. Thompson Park (near Butte)
9. Rock Creek Drainage
    c. 5th code HUCs (Montana NRIS 2003 Version Watersheds)
        - 1701020207 East Fork Rock Creek
        - 1701020208 Middle Fork Rock Creek

- 1701020209 Ross Fork Rock Creek
- 1701020210 West Fork Rock Creek
- 1701020211 Upper Willow Creek
- 1701020212 Upper Rock Creek

10. Areas Evaluated for Potential Wilderness (FEIS, Appendix C)
11. Management areas allocated to resource uses, where timber harvest is permitted, but other resource objectives are primary.

Anderson Mountain	Hells Canyon	Ruby-Horse Creek
Antelope Basin	Horse Prairie South	Stony
Basin Creek Municipal Watershed	Idaho Creek	Timber Creek
Brown Back	John Long	Tobacco Root Peaks
Bull Mountains	Johnny Gulch	Upper Ruby
Centennial Foothills	Lima Peaks	Upper Willow
Chain of Lakes	Lobo Mesa Madison	Wall Creek
East Fork	Medicine Lodge / Tendoy	West Fork Madison
Electric Peak	Middle Fork	West Fork Rock Creek
Flint Uplands	Middle Mountain	Whitetail
Greenhorn Mountains	Ross Fork	Wigwam Cherry
Hellroaring	Ruby-Centennial Corridor	Wisconsin

The remaining lands are suitable for timber production

Lands Suitable for Timber Production: (Step Three)

Lands Suitable for Timber Production are those acres not identified as lands where timber harvest is permitted in the two classifications above.

Management Areas that contain lands allocated to Suitable for Timber Production:

Backyard Butte	Horse Prairie North	Ramshorn
Basin-Cataract	Humbug	Ruby
Boulder River-Sheepshead	Kit Carson	Selway-Saginaw
Bryant Creek	Little Boulder	South Fleecer
Burton Park	Little Boulder-Galena Gulch	South Boulder Corridor
Butte North	Meadow Creek	South Willow Corridor
East Deerlodge	Mormon-Buffalo	Tie-Johnson
East face	Northeast Fleecer	Trail Creek
Fishtrap-Mount Haggin	Pintler Face	Warm Springs
Flint Foothills	Pipestone	West Big Hole Flats
Harvey Creek Foothills	Quartz Hill	West Face

VEGETATION

Goals

Biodiversity: A variety of disturbance processes are managed or allowed to occur that produce resilient vegetation communities able to sustain diversity in the face of uncertain future climate-influenced disturbances. Resilient vegetation communities will have a mosaic of species and age classes of trees, shrubs, grasses, and forbs for animal forage and cover, and perpetuate the diversity of plants and the microbial and insect communities upon which they are dependent. Old growth is managed on a forest wide basis and is well distributed.

Unique Habitats: The trend toward an older forest is altered by increasing the younger age classes providing greater forest diversity in age classes. Stable or upward trends are achieved for declining or unique habitats.

Sensitive Plants: Sensitive plant populations and their habitat are maintained or restored. Large core populations or fringe-of-range populations of sensitive plants are conserved in research natural areas, botanical special interest areas, or protected as populations in conservation strategies, or project design specifications (Scale - Populations).

Non-native Species: The influx of persistent non-native species is minimized by using native plants, seed, and vegetative propagules for restoration work.

Pest Management: Diagnosed pest problems are addressed with an integrated pest management approach, which allows monitoring, prevention, cultural, mechanical, biological, genetic and chemical techniques.

Objectives

Forested Vegetation

Resiliency: (See Glossary) Reduce forest density in the large size classes of dry forest communities and some lodgepole pine communities to maintain or improve resilient forest conditions.

Douglas-fir Type: Increase the number of acres in the 0 to 5 inch DBH class on approximately 20,000 acres, where one or more of the following circumstances occurs:

- Where burned or insect infested stands are dead or dying (see Glossary)
- Where needed to reduce the risk from wildfire for public and firefighter health and safety, or to protect structures, infrastructure, and municipal watersheds.
- Where needed to meet objectives for lands suitable for timber production.
- Douglas-fir which has established itself in former grasslands/shrublands (colonization) is not considered part of the Douglas-fir base described above.

Lodgepole Pine Type: Increase the number of acres in the 0 to 5 inch DBH class by approximately 74,000 acres, where one or more of the following circumstances occurs:

- Where burned or insect infested stands are dead or dying (see Glossary)
- Where needed to reduce the risk from wildfire for public and firefighter health and safety, or to protect structures, infrastructure and municipal watersheds
- Where needed to meet objectives for lands suitable for timber production.

Aspen Component: Increase the aspen component within lodgepole pine and other vegetation types, on 67,000 acres.

Whitebark Pine/Sub-Alpine Fir Type: Promote regeneration of whitebark pine on approximately 45,000 acres, largely through the use of fire.

All Other Forested Vegetation Types: Manage within the historic range of variability.

Grassland/Shrubland/Riparian: Reduce conifer encroachment on 74,000 acres of riparian areas, shrublands, and grasslands.

Noxious Weeds: Prevent, reduce, or eliminate infestations of non-native or noxious weed species with emphasis on areas where there is a high likelihood of establishment and spread. Manage noxious weeds through Integrated Pest Management as described in the most current Beaverhead-Deerlodge Noxious Weed Control Record of Decision.

Reference populations of sensitive plants: Monitor G1 thru G3 ranked sensitive plants, perform conservation assessments, and develop conservation strategies for species showing downward trends (Scale - BNDF populations).

Standards

Standard 1: Mechanical vegetation treatments and prescribed fire in old growth stands (see Glossary) do not reduce the age and number of large trees and basal area below the 'minimum criteria' required for Eastern Montana old growth in Green et al, Table 3. Removing hazardous fuels within old growth stands is allowed if conducted in a manner that meets this requirement. This requirement does not apply to hazard tree removal and other public safety needs.

Standard 2: Silvicultural examinations and prescriptions will be required prior to timber manipulation or silvicultural treatment. Exceptions are allowed for removal of trees that block vision along roads, removal of hazard trees, clearing of rights-of-way, clearing for mineral development, Christmas tree sales in encroachment areas, and removal of firewood.

WILDLIFE HABITAT

Goals

Habitat: Cover and forage for animals is provided by a mosaic of species and age classes of native trees, shrubs, grasses, and forbs. See Vegetation Goals for details.

Grizzly Bear Conflicts: Conflicts between grizzly bears and humans or human activities in occupied grizzly bear habitat, are managed such that the removal of a bear is not necessary.

Connectivity: Forest management contributes to wildlife linkages between landscapes, unless landscape isolation is determined to be beneficial. Linkage areas are those areas identified for large carnivores and ungulates through multi-agency coordination. Options may include, but are not limited to:

- Maintaining Forest Service ownership at highway and road crossings,
- Consolidating ownership at approach areas to highway and road crossings substantiated by empirical data as necessary to facilitate wildlife movement, and
- Providing secure habitat at the landscape scale to facilitate large animal movement.

Sage Grouse: Sagebrush habitat supports sage grouse and pygmy rabbit populations by providing suitable sage grouse brood-rearing habitat on at least 40% of the sagebrush habitat within 18 kilometers of documented active or inactive sage grouse leks and the area mapped as potential pygmy rabbit habitat.

Wildlife Secure Areas and Connectivity: Secure areas and connectivity for ungulates and large carnivores are provided, while recognizing the variety of recreational opportunities.

Grizzly Bear Security: The Gravelly Landscape is maintained to achieve 60% or greater secure areas (Scale - Gravelly Landscape).

Wildlife Security: Manage density of open motorized roads and trails by landscape year-round, except fall rifle big game season, to achieve levels at or below the following (Scale - Landscapes):

Table 13. Density of Roads and Trails Open to Motorized Use by Landscape

Landscape	**Desired Open Motorized Road and Trail Density**
	Miles per Sq. Mile*
Big Hole	1.2
Boulder River	1.9
Clark Fork - Flints	1.9
Gravelly	0.7
Jefferson River	1.6
Lima Tendoy	1.0

Landscape	Desired Open Motorized Road and Trail Density
	Miles per Sq. Mile*
Madison	0.0
Pioneer	1.5
Tobacco Roots	1.3
Upper Clark Fork	2.0
Upper Rock Creek	0.9

**This includes roads available for permitted or administrative use.*

Elk Security: Elk security is managed to provide quality elk habitat, provide a variety of recreational hunting opportunities, and provide support for Montana's fair chase emphasis.

Manage open motorized road and trail density by MTFWP hunting units as of 2006 - on National Forest lands during the fall rifle big game season, to achieve levels at or below the following: (Scale - Hunting Unit)

Table 14. Hunting Season Open Motorized Road/Trail Densities by Hunting Unit

Hunting Unit	Desired Fall Open Motorized Road and Trail Density
	Miles per Sq. Mile*
210	0.9
211	0.5
212	1.4
213	1.4
214	1.6
215	1.5
216	0.8
300	0.6
302	1.0
311	0.0
318	1.8
319	0.6
320	0.8
321	1.1
323	0.5
324	0.4
327	0.8
328	0.8
329	1.1
330	0.7
331	1.5
332	0.8

Hunting Unit	Desired Fall Open Motorized Road and Trail Density
	Miles per Sq. Mile*
333	0.9
340	1.4
341	0.5
350	1.3
360	0.0
362	0.0
370	1.0

**This includes roads available for permitted or administrative use.*

Objectives

Grizzly Bear Conflicts: Implement food storage and sanitation orders in areas classified as occupied grizzly bear habitat.

Road and Trail Densities by Hunting Unit: From October 15 to December 1, reduce the open motorized road and trail densities in hunting units 215 to 1.5; 300 to 0.6; 302 to 1.0; 318 to 1.8; 333 to .9; 341 to .5; and 350 to 1.3 miles per square mile or less.

Road and Trail Densities by Landscape: Reduce the open motorized road and trail densities from May 16 to December 1 in the Boulder River Landscape to 1.9 and Jefferson River Landscape to 1.6 miles per square miles or less.

Management Indicator Species: Maintain habitat conditions for elk security and winter habitat integrity for wolverine and mountain goat as reflected by changes in abundance of these Management Indicator Species (MIS).

Sage Grouse: Maintain or improve sagebrush height, and canopy and grass-forb canopy of sagebrush habitat, emphasizing habitat within 18 kilometers of documented active or inactive sage grouse leks and the area mapped as potential pygmy rabbit habitat.

Snags: Snags and woody debris are well distributed by vegetation category and size class over time.

Sensitive and Federally Listed Species: Information in the following sources should be considered when designing projects that may affect sensitive species or federally listed species.

- Management Plan and Conservation Strategies for Sage Grouse in Montana
- Northern Region Conservation Assessment for Northern Goshawk, Black-backed Woodpecker, Flammulated Owl, and Pileated Woodpecker (March 2006)
- Montana Comprehensive Wildlife Conservation Strategy
- Grizzly Bear Conservation for the Greater Yellowstone Area National Forests (GYA)
- Northern Rocky Mountain Gray Wolf Recovery Plan

- Montana Bald Eagle Management Plan. (refer to the State conservation plan or other appropriate plan.)

Standards

Standard 1: From October 15 to December 1 Hunting Units that exceed the open motorized road and trail density objective will have no net increase in designated open motorized road and trail mileage (Scale - Hunting Units on National Forest lands).

Standard 2: Landscapes that exceed the open motorized road and trail objective will have no net increase in designated open motorized road and trail mileage (Scale – Landscapes on National Forest System Lands).

Standard 3: Mechanical vegetation treatments will:

Retain all snags greater than 20” dbh (except for hazard trees).

In addition, do not reduce the number of snags greater than 15.0” dbh per acre in treatment units below the levels shown in the Table 12, calculated as an average for the total treatment unit acreage in a project area. This calculation allows variability among treatment units which produces a more natural clumpy distribution.

If there are insufficient snags in treatment units, live trees in the same size class must be retained and counted towards the snag requirement. These would be in addition to any requirements of Standard 4.

These per acre requirements do not apply to the treatment units if analysis shows the levels of snags will be met for the project area as a whole.

If, in the project area as a whole, there are insufficient live trees and/or snags greater than 15.0” dbh, the standard is deemed complied with by retention of the existing live trees and/or snags greater than 15.0” dbh in the treatment units.

Table 12. Minimum average snags per acre to be retained, calculated for the total treatment unit acreage in a project area.

Vegetation Category	Minimum average snags per acre to retain
	Snags > 15.0” dbh
Warm	3.6
Cool	8
Cold	5
PICO	6.4

Standard 4: Do not reduce the number of live trees greater than 10.0” dbh per acre in regeneration harvest treatment units (to provide future snags) below the levels shown in Table 13 on the next page.

Table 13. Minimum average live trees per acre to be retained after regeneration harvest, to supply future snags (if available), calculated for the total treatment unit acreage in a project area.

Vegetation Category	Minimum average live trees per acre to retain
	Live trees> 10.0" dbh
Warm	1.3
Cool	0.9
Cold	1.4
PICO	0.6

Standard 5: Sheep allotments in the Gravelly Landscape which become vacant will be closed to sheep grazing or the vacant allotment may be used by an existing Gravelly Landscape sheep permittee, with no increase in permitted use (Scale - Gravelly Landscape).

Standard 6: The Grizzly Bear Amendment applies to only the Beaverhead-portion of the BDNF and is incorporated as Appendix G (USDA 2006b).

Standard 7: The Northern Rockies Lynx Management Direction (2007) is included in Appendix G, and will apply to the BDNF as described in the Northern Rockies Lynx Management Record of Decision.

Standard 8: Within 18 kilometers of documented active or inactive sage grouse leks, do not remove sagebrush within 300 meters of riparian zones, meadows, lakebeds or farmland, unless site specific analysis indicates such removal promotes achievement of the sagebrush habitat goal. Springs developed for livestock water in these areas must be designed to maintain free water and wet meadows

Standard 9: Mitigate, through avoidance or minimization, management actions around known active nest sites of threatened, endangered, proposed candidate, and sensitive bird species, if those actions would disrupt reproductive success during the nesting period. During project planning consider applicable science regarding species needs (such as nesting periods and buffers) and site-specific considerations. This standard also applies to Great Gray Owl and Northern Goshawk.

Standard 10: When closing entrances to abandoned mines, determine whether suitable habitat for bats exists, and where it does, provide access for bats.

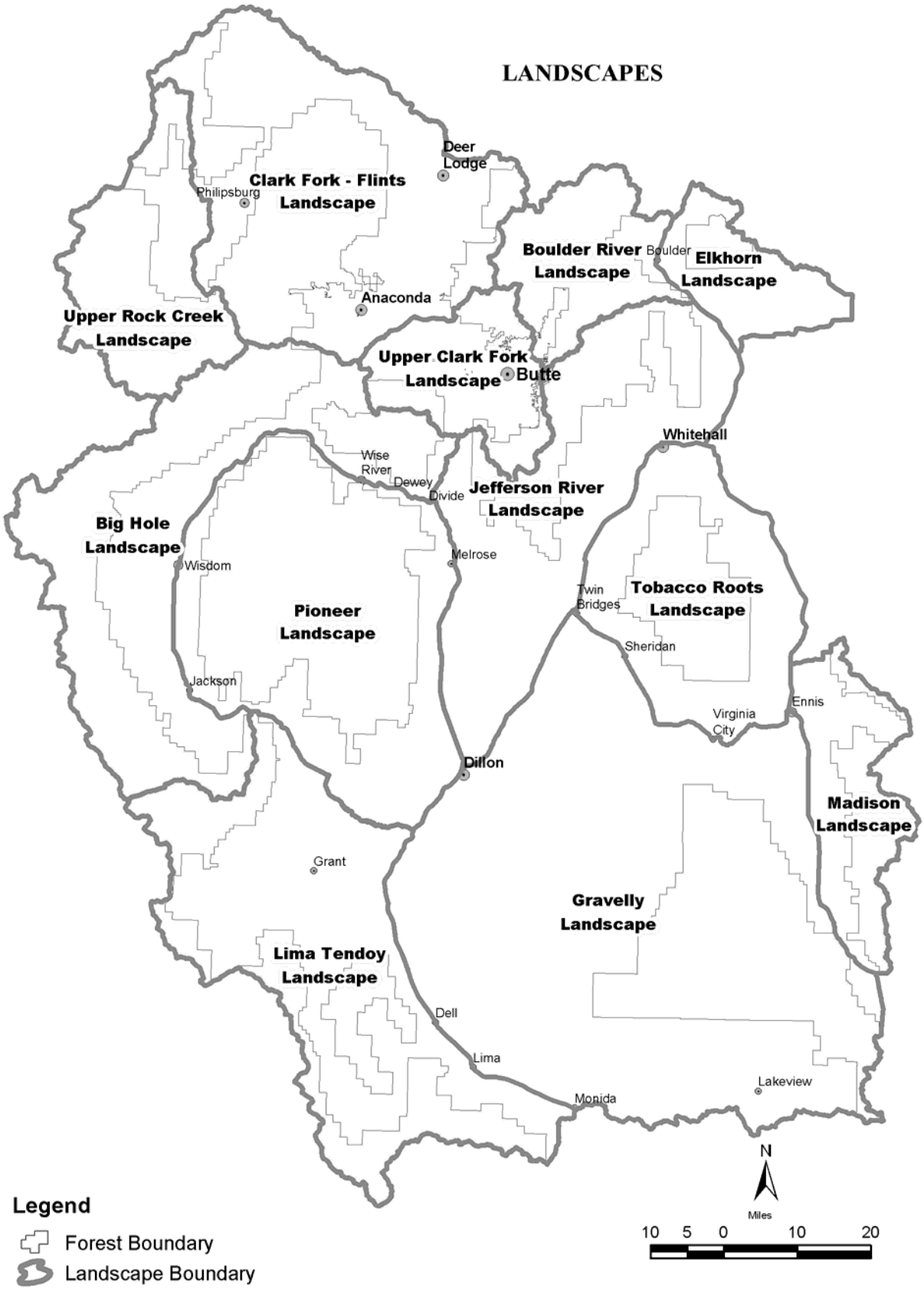
Standard 11: Implement the most current National Fish and Wildlife Service Terms and Conditions for wolves in the northwest Montana recovery area (west of I-15 and north of I-90) until such time as the gray wolf is delisted. (See Appendix I)

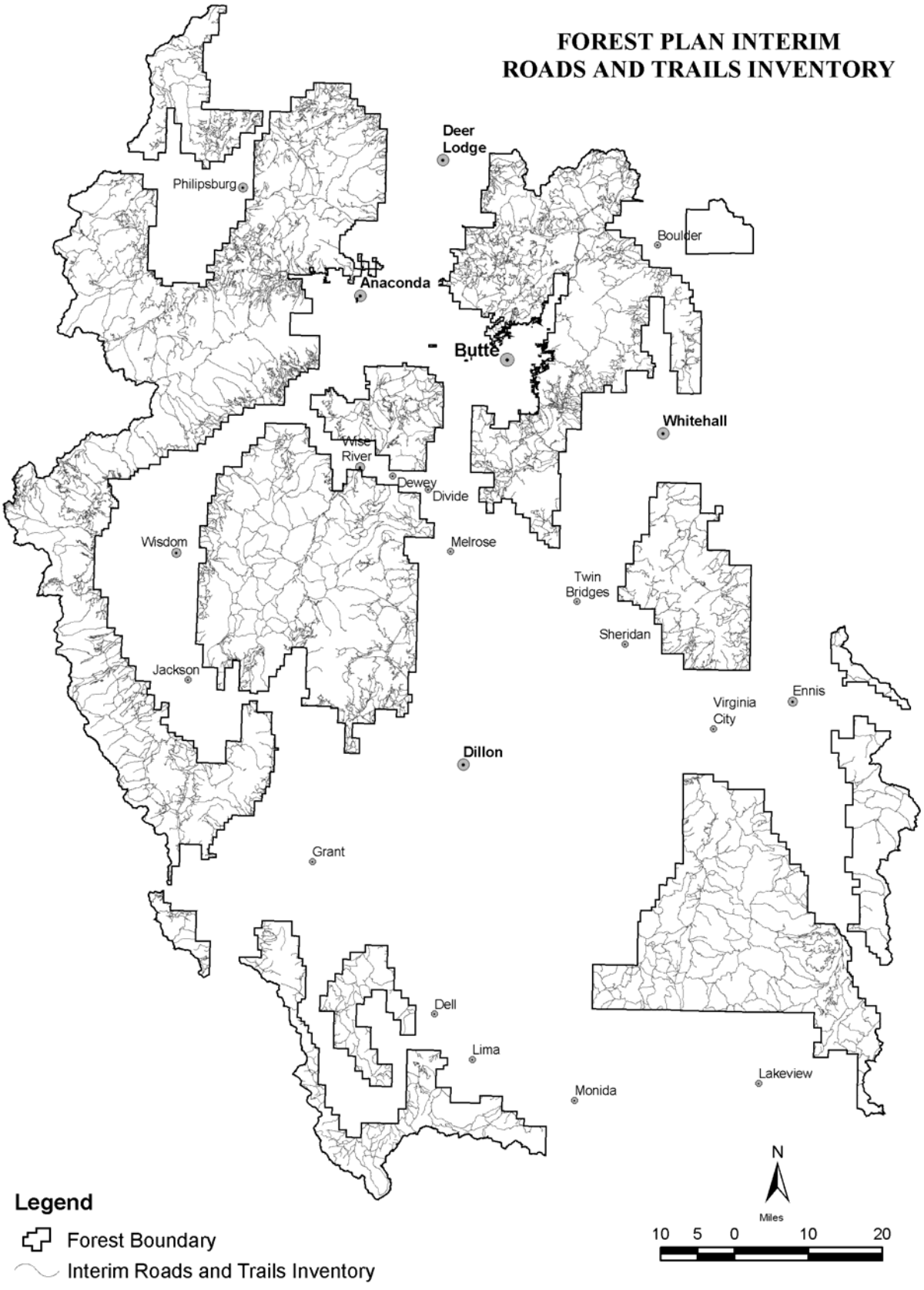
Standard 12: Provide habitat for species requiring large woody debris in forested habitat types by retaining post project outcomes for regeneration harvest of the following: (Scale-project)

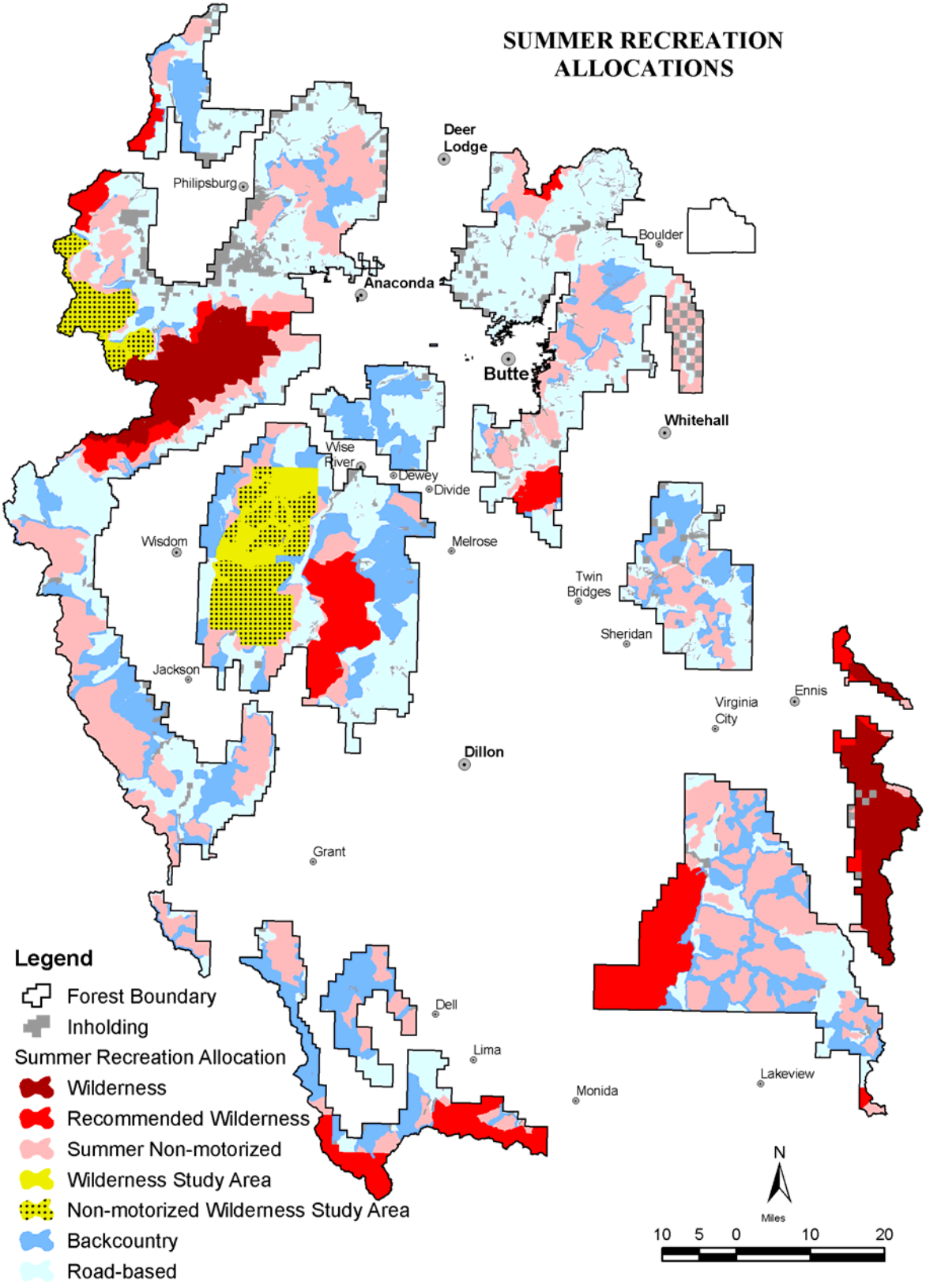
- Lodgepole cover type-6 pieces/ac with small end diameter equal to or greater than 8 inches and 10-ft long.
- Douglas-fir cover type-6 pieces/ac with small end diameter equal to or greater than 12 inches and 10-ft long.

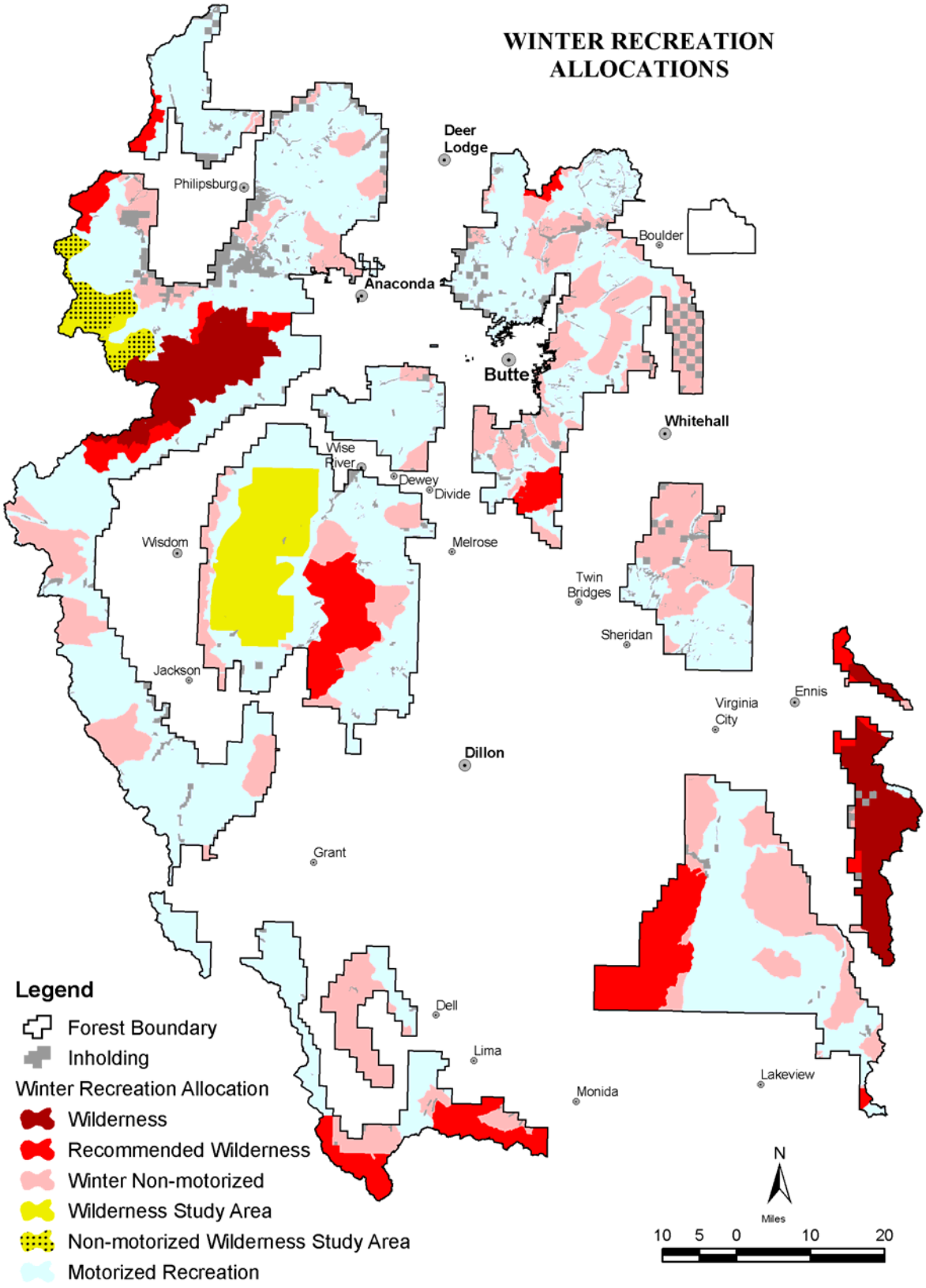
CHAPTER 3 - MAP SECTION

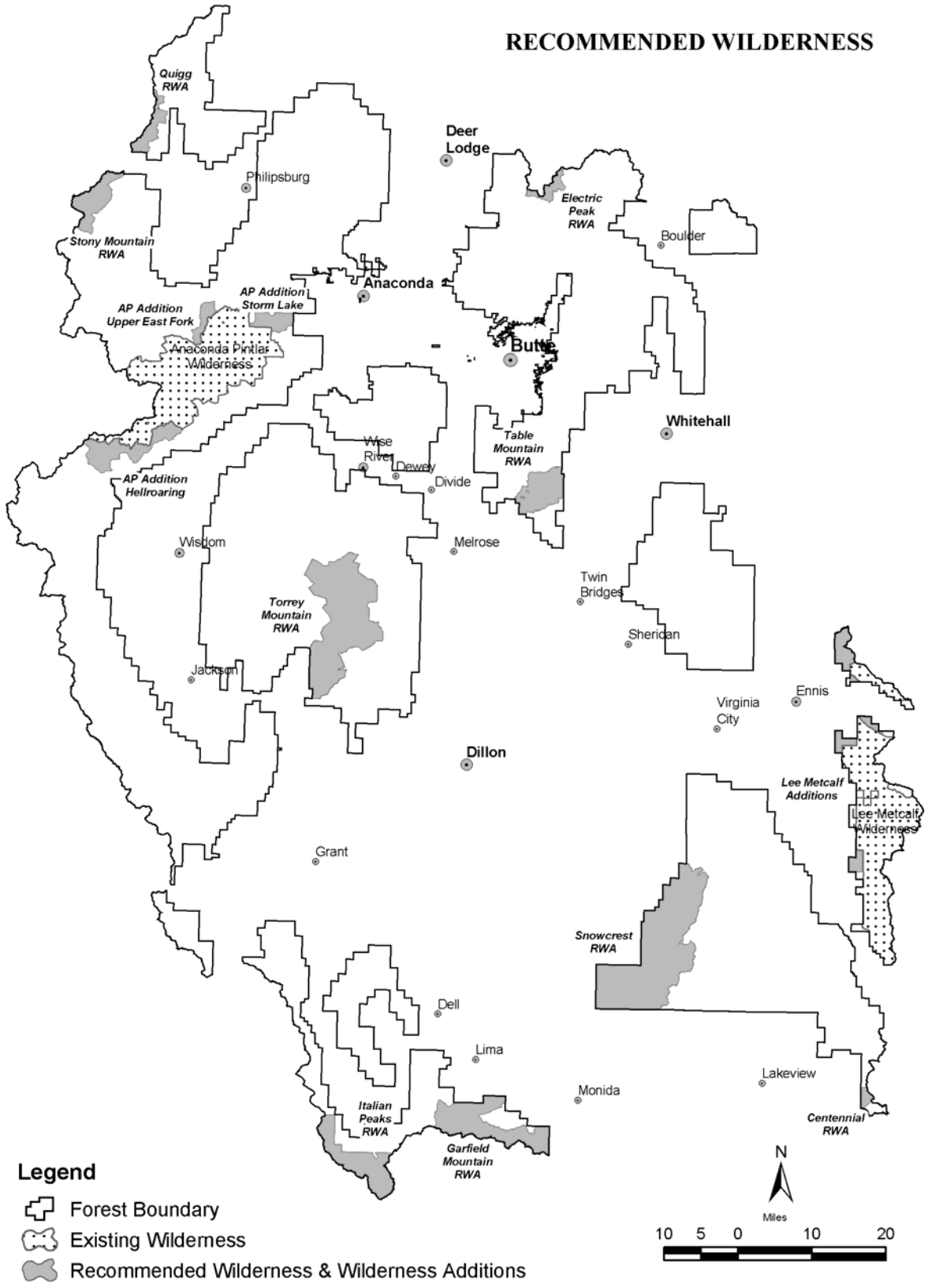
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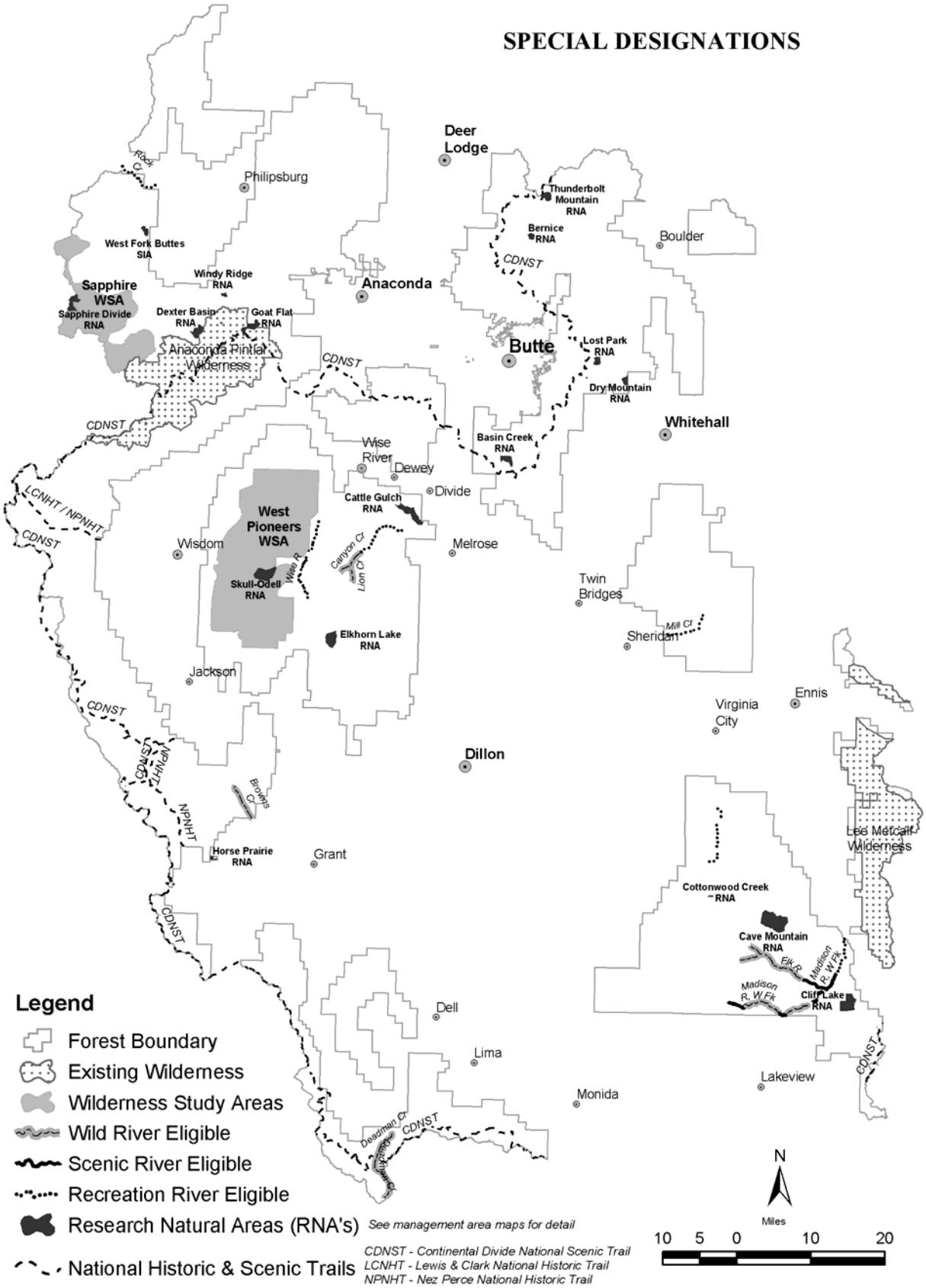

LANDSCAPES
Deer Lodge
Clark Fork - Flints Landscape
Philipsburg
Boulder River Landscape
Boulder
Elkhorn Landscape
Anaconda
Upper Rock Creek Landscape
Upper Clark Fork Landscape
Butte
Whitehall
Wise River
Dewey
Divide
Jefferson River Landscape
Big Hole Landscape
Wisdom
Melrose
Twin Bridges
Tobacco Roots Landscape
Pioneer Landscape
Sheridan
Jackson
Ennis
Virginia City
Dillon
Madison Landscape
Grant
Gravelly Landscape
Lima Tendoy Landscape
Dell
Lima
Lakeview
Monida
N
Miles
10 5 0 10 20
Legend
Forest Boundary
Landscape Boundary

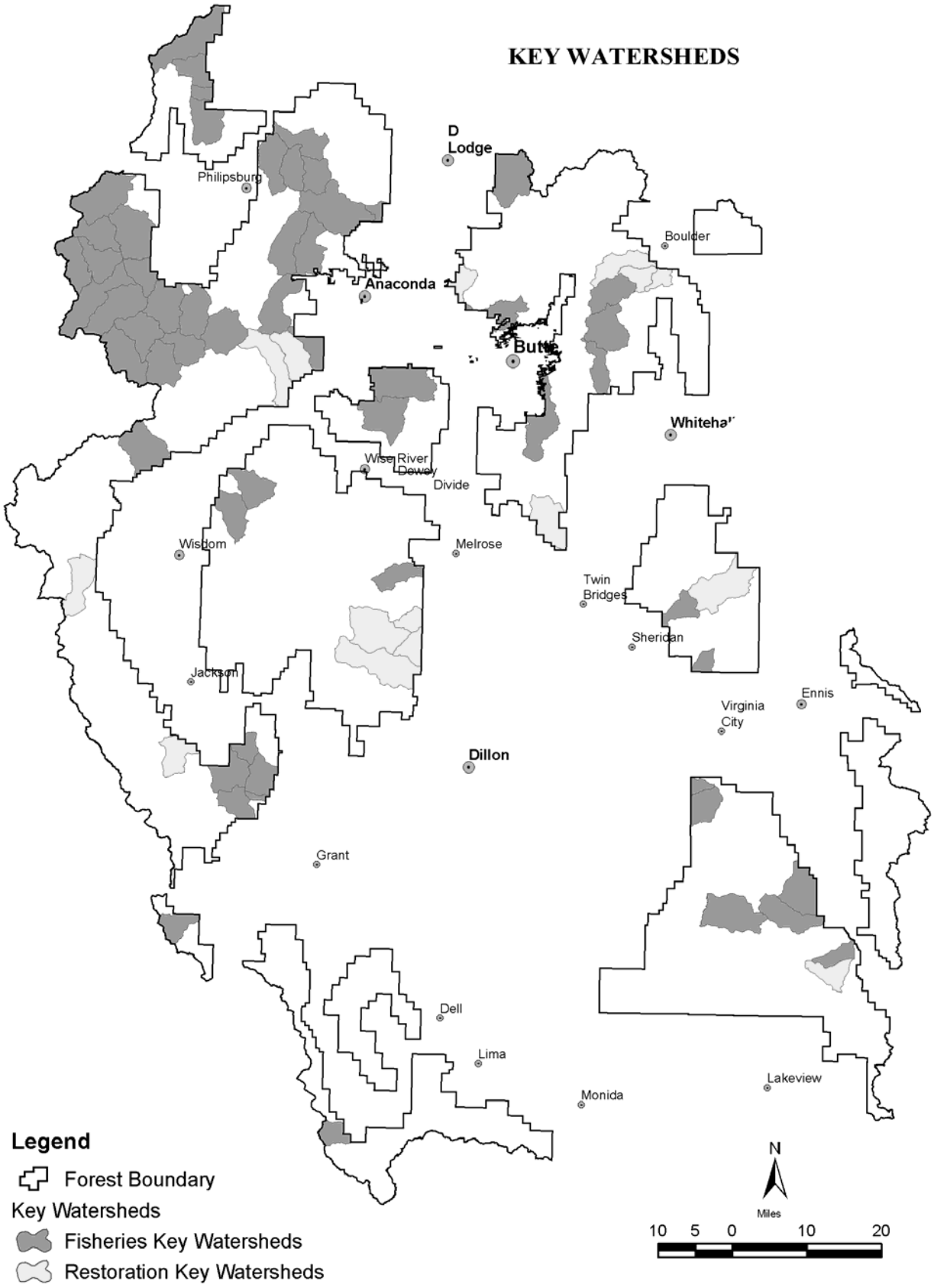

FOREST PLAN INTERIM
ROADS AND TRAILS INVENTORY
Deer Lodge
Philipsburg
Boulder
Anaconda
Butte
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
Twin Bridges
Sheridan
Jackson
Ennis
Virginia City
Dillon
Grant
Dell
Lima
Monida
Lakeview
N
Miles
10 5 0 10 20
Legend
Forest Boundary
Interim Roads and Trails Inventory

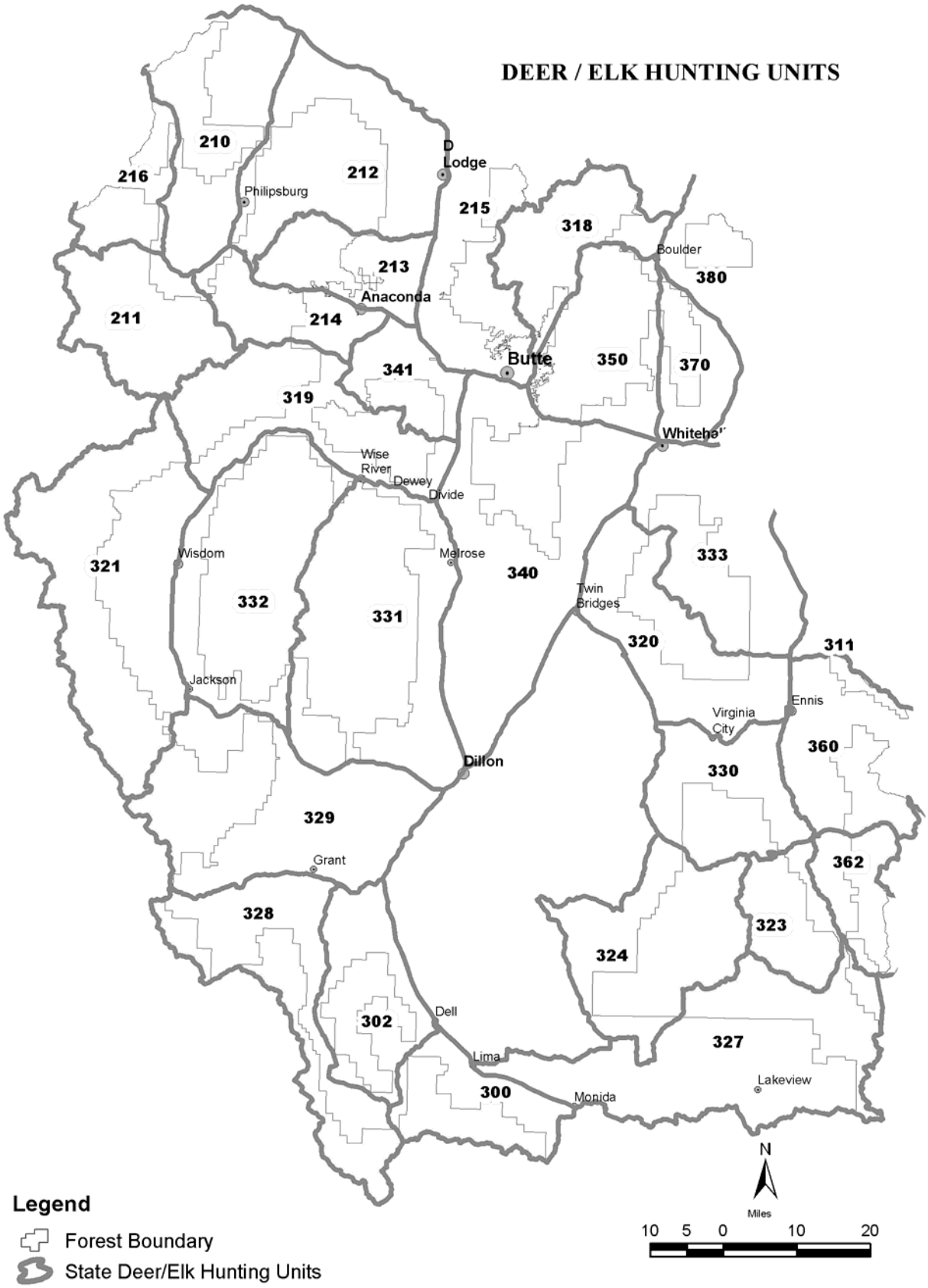

SUMMER RECREATION ALLOCATIONS
Deer Lodge
Philipsburg
Boulder
Anaconda
Butte
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
Twin Bridges
Sheridan
Jackson
Virginia City
Ennis
Dillon
Grant
Dell
Lima
Monida
Lakeview
Legend
Forest Boundary
Inholding
Summer Recreation Allocation
Wilderness
Recommended Wilderness
Summer Non-motorized
Wilderness Study Area
Non-motorized Wilderness Study Area
Backcountry
Road-based
N
Miles
10 5 0 10 20

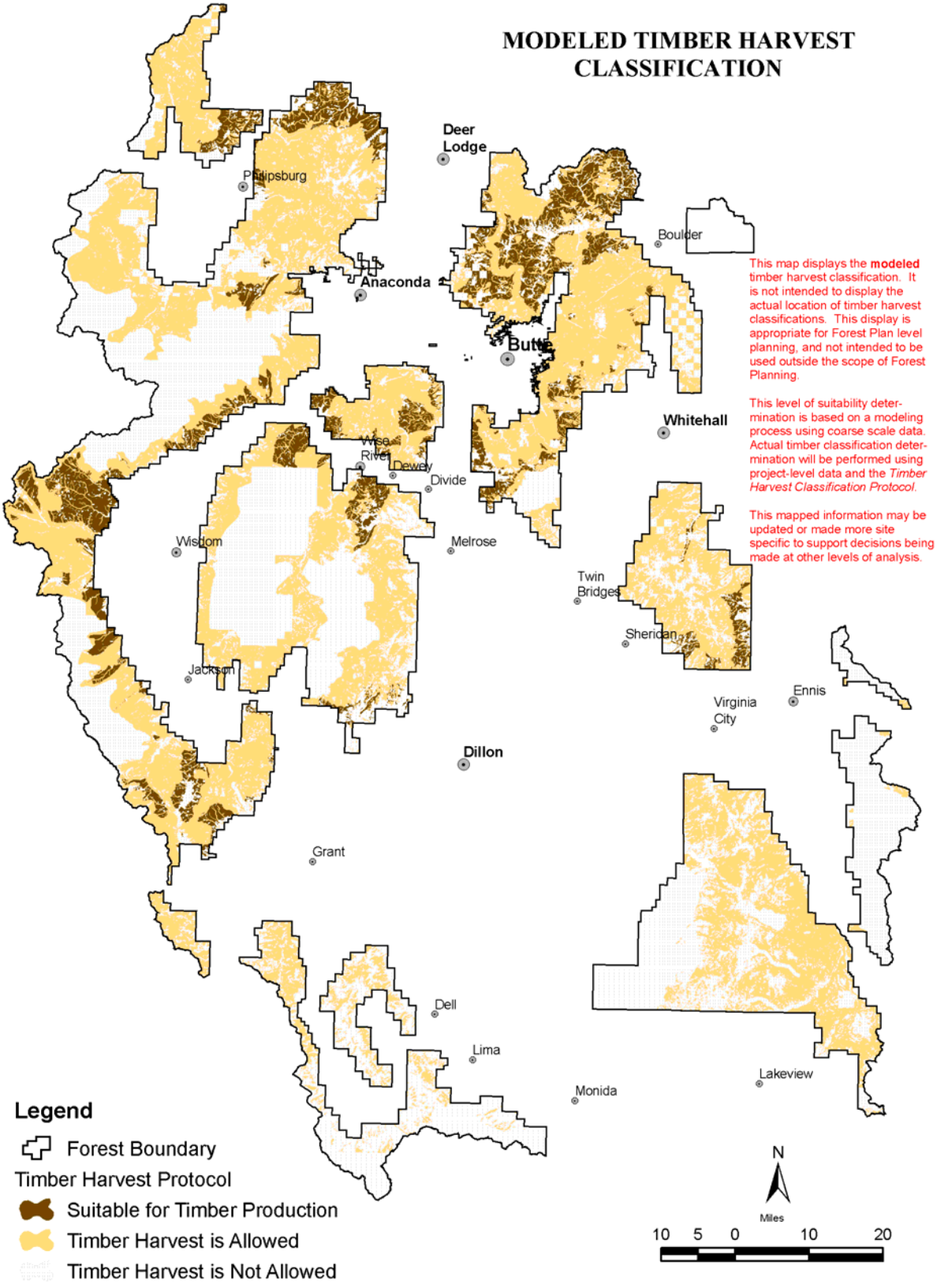

WINTER RECREATION ALLOCATIONS
Deer Lodge
Philipsburg
Boulder
Anaconda
Butte
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
Twin Bridges
Sheridan
Jackson
Ennis
Virginia City
Dillon
Grant
Dell
Lima
Monida
Lakeview
Legend
Forest Boundary
Inholding
Winter Recreation Allocation
Wilderness
Recommended Wilderness
Winter Non-motorized
Wilderness Study Area
Non-motorized Wilderness Study Area
Motorized Recreation
N
Miles
10 5 0 10 20

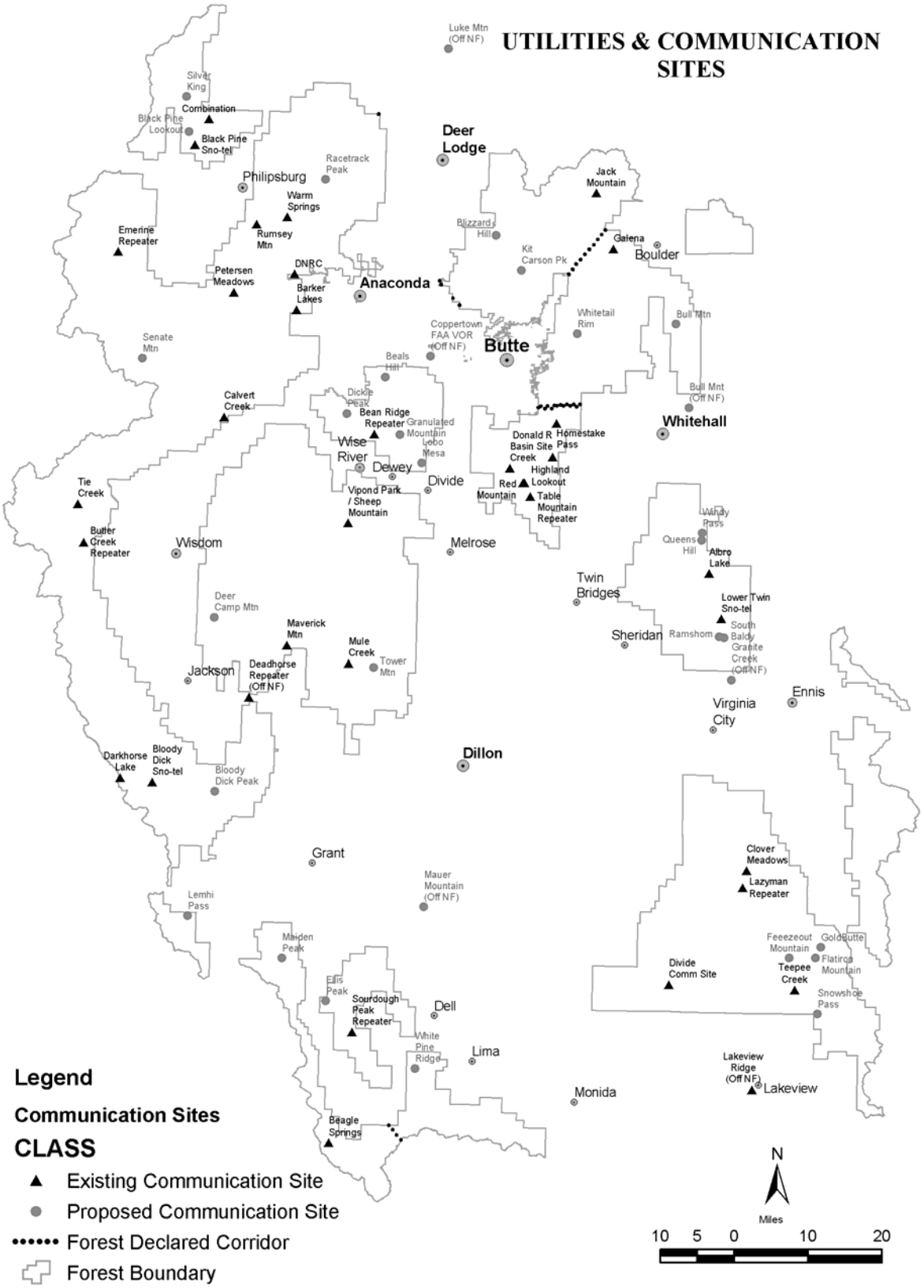

RECOMMENDED WILDERNESS
Quigg RWA
Deer Lodge
Philipsburg
Electric Peak RWA
Boulder
Stony Mountain RWA
Anaconda
AP Addition Storm Lake
AP Addition Upper East Fork
Anaconda Pintlar Wilderness
Butte
Whitehall
Table Mountain RWA
Wise River
Dewey
Divide
AP Addition Hellroaring
Wisdom
Melrose
Twin Bridges
Torrey Mountain RWA
Sheridan
Jackson
Virginia City
Ennis
Dillon
Lee Metcalf Additions
Lee Metcalf Wilderness
Grant
Snowcrest RWA
Dell
Lima
Lakeview
Monida
Italian Peaks RWA
Garfield Mountain RWA
Centennial RWA
N
Miles
10 5 0 10 20
Legend
Forest Boundary
Existing Wilderness
Recommended Wilderness & Wilderness Additions


SPECIAL DESIGNATIONS
Deer Lodge
Philipsburg
Rock Cr
West Fork Buttes SIA
Windy Ridge RNA
Sapphire WSA
Sapphire Divide RNA
Dexter Basin RNA
Goat Flat RNA
Anaconda Pintlar Wilderness
Anaconda
Thunderbolt Mountain RNA
Bernice RNA
Boulder
CDNST
Butte
Lost Park RNA
Dry Mountain RNA
Whitehall
Basin Creek RNA
Wise River
Dewey
Divide
Cattle Gulch RNA
West Pioneers WSA
Wisdom
Melrose
Canyon Cr
Lion Cr
Wise R
Skull-Odell RNA
Elkhorn Lake RNA
Twin Bridges
Sheridan
Mill Cr
Jackson
LCNHT / NPNHT
Virginia City
Ennis
Dillon
Browns Cr
Horse Prairie RNA
Grant
NPNHT
Lee Metcalf Wilderness
Cottonwood Creek RNA
Cave Mountain RNA
Elk R
Madison R. W.Fk.
Cliff Lake RNA
Dell
Lima
Monida
Lakeview
Deadman Cr
Legend
Forest Boundary
Existing Wilderness
Wilderness Study Areas
Wild River Eligible
Scenic River Eligible
Recreation River Eligible
Research Natural Areas (RNA's)
See management area maps for detail
National Historic & Scenic Trails
CDNST - Continental Divide National Scenic Trail
LCNHT - Lewis & Clark National Historic Trail
NPNHT - Nez Perce National Historic Trail
N
Miles
10 5 0 10 20


KEY WATERSHEDS
D
Lodge
Philipsburg
Boulder
Anaconda
Butte
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
Twin
Bridges
Sheridan
Jackson
Ennis
Virginia
City
Dillon
Grant
Dell
Lima
Monida
Lakeview
Legend
Forest Boundary
Key Watersheds
Fisheries Key Watersheds
Restoration Key Watersheds
N
Miles
10 5 0 10 20


DEER / ELK HUNTING UNITS
210
216
212
D
Lodge
Philipsburg
215
318
Boulder
213
380
Anaconda
211
214
Butte
350
370
341
319
Whitehall
Wise
River
Dewey
Divide
321
Wisdom
Melrose
340
333
332
331
Twin
Bridges
320
311
Jackson
Ennis
Virginia
City
360
Dillon
330
329
Grant
362
328
323
324
Dell
302
327
Lima
Lakeview
300
Monida
N
Miles
10 5 0 10 20
Legend
Forest Boundary
State Deer/Elk Hunting Units


MODELED TIMBER HARVEST CLASSIFICATION
Deer Lodge
Philipsburg
Boulder
Anaconda
Butte
Whitehall
Wise River
Dewey
Divide
Wisdom
Melrose
Twin Bridges
Sheridan
Jackson
Virginia City
Ennis
Dillon
Grant
Dell
Lima
Monida
Lakeview
This map displays the modeled timber harvest classification. It is not intended to display the actual location of timber harvest classifications. This display is appropriate for Forest Plan level planning, and not intended to be used outside the scope of Forest Planning.
This level of suitability determination is based on a modeling process using coarse scale data. Actual timber classification determination will be performed using project-level data and the Timber Harvest Classification Protocol.
This mapped information may be updated or made more site specific to support decisions being made at other levels of analysis.
Legend
Forest Boundary
Timber Harvest Protocol
Suitable for Timber Production
Timber Harvest is Allowed
Timber Harvest is Not Allowed
N
Miles
10 5 0 10 20


UTILITIES & COMMUNICATION SITES
Luke Mtn (Off NF)
Silver King
Combination
Black Pine Lookout
Black Pine Sno-tel
Deer Lodge
Racetrack Peak
Philipsburg
Warm Springs
Rumsey Mtn
Emerine Repeater
Petersen Meadows
DNRC
Barker Lakes
Anaconda
Jack Mountain
Blizzard Hill
Kit Carson Pk
Galena
Boulder
Whitetail Rim
Bull Mtn
Coppertown FAA VOR (Off NF)
Butte
Senate Mtn
Beals Hill
Calvert Creek
Dickie Peak
Bean Ridge Repeater
Granulated Mountain
Lobo Mesa
Wise River
Dewey
Divide
Vipond Park / Sheep Mountain
Donald R Basin Site
Creek
Homestake Pass
Highland Lookout
Red Mountain
Table Mountain Repeater
Bull Mnt (Off NF)
Whitehall
Whiskey Pass
Queens Hill
Albro Lake
Tie Creek
Butler Creek Repeater
Wisdom
Melrose
Twin Bridges
Lower Twin Sno-tel
Deer Camp Mtn
Maverick Mtn
Mule Creek
Tower Mtn
Jackson
Deadhorse Repeater (Off NF)
Sheridan
Ramshorn
South Baldy
Granite Creek (Off NF)
Ennis
Virginia City
Darkhorse Lake
Bloody Dick Sno-tel
Bloody Dick Peak
Dillon
Grant
Mauer Mountain (Off NF)
Lemhi Pass
Clover Meadows
Lazyman Repeater
Maiden Peak
Feeezeout Mountain
Goldbutte
Flatiron Mountain
Teepee Creek
Divide Comm Site
Ellis Peak
Sourdough Peak Repeater
Dell
Snowshoe Pass
White Pine Ridge
Lima
Lakeview Ridge (Off NF)
Lakeview
Monida
Beagle Springs
Legend
Communication Sites
CLASS
Existing Communication Site
Proposed Communication Site
Forest Declared Corridor
Forest Boundary
N
Miles
10 5 0 10 20

CHAPTER 4 - MANAGEMENT AREA DIRECTION

This chapter contains direction specific to each management area. The BDNF is divided into 11 landscapes, which are further divided into unique management areas (MAs). MA boundaries delineate geographic areas with similar management direction. With the exception of congressionally established or special administrative boundaries, the lines are mapped based on coarse scale data. They represent a transition from one set of opportunities and constraints to another. Site specific planning and on the ground reconnaissance may refine or adjust these lines to reflect the intent of management direction.

Each landscape section contains a landscape description with maps of individual management areas (MA) with a page of management direction specific to each MA.

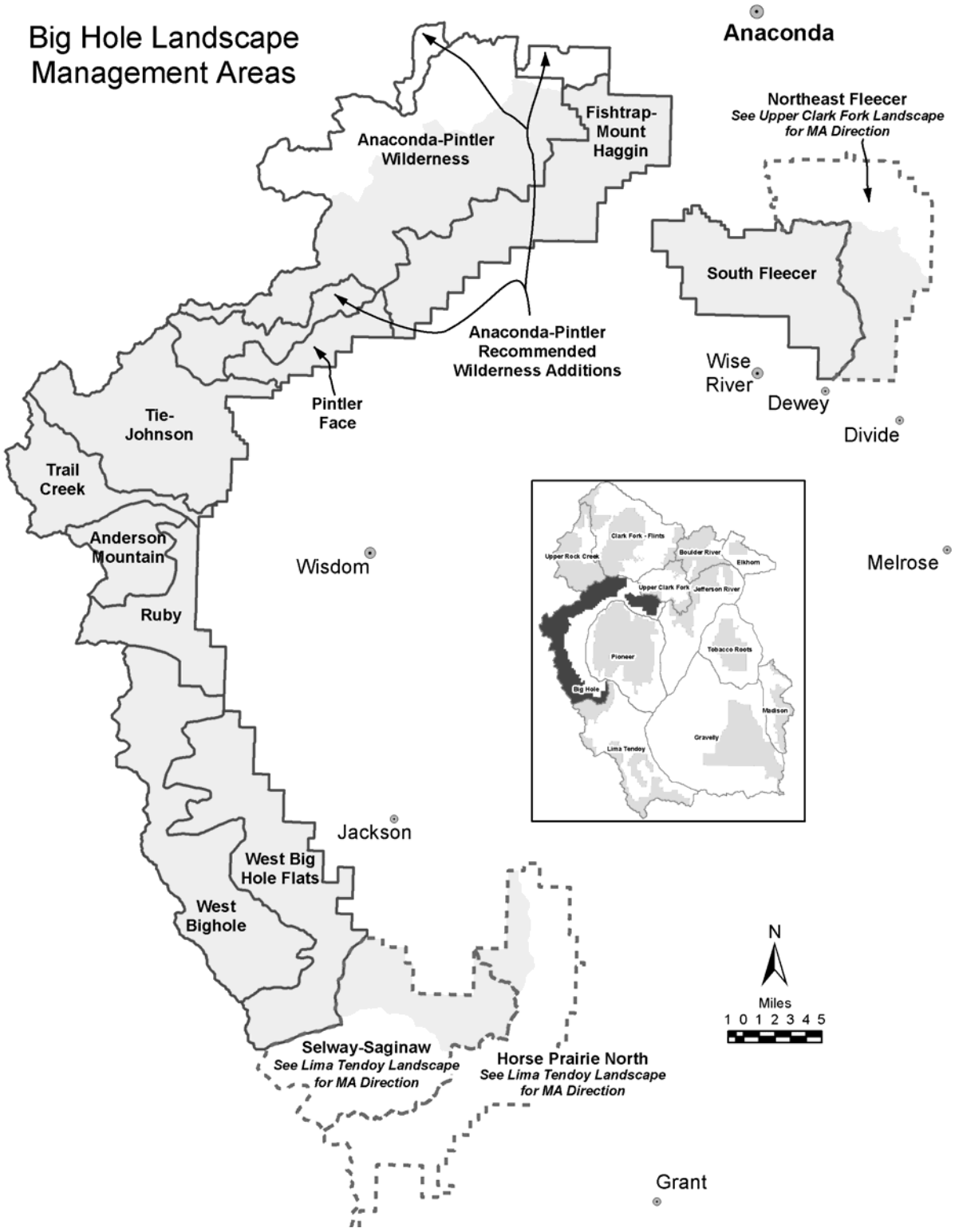
Management Area Map: These maps display percent of allocations, summer and winter motorized restrictions, percent of key watersheds, some special designations and utility rights of way.

Management: Program priorities and recreation settings are described and specific mention is made where direction applies only to a portion of an area.

Management areas may contain Objectives and Standards in addition to those described in Chapter 3.

Scenic Integrity: The rating for each area will be listed.

Landscapes	Page
Big Hole	65
Boulder River	89
Clark Fork Flint	109
Elkhorn	125
Gravelly	127
Jefferson River	165
Lima Tendoy	181
Madison	197
Pioneer	205
Tobacco Root	221
Upper Clark Fork	241
Upper Rock Creek	251


Big Hole Landscape
Management Areas
Anaconda
Northeast Fleecer
See Upper Clark Fork Landscape
for MA Direction
Fishtrap-
Mount
Haggin
Anaconda-Pintler
Wilderness
South Fleecer
Anaconda-Pintler
Recommended
Wilderness Additions
Wise
River
Dewey
Divide
Pintler
Face
Tie-
Johnson
Trail
Creek
Anderson
Mountain
Ruby
Wisdom
Melrose
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Pioneer
Tobacco Roots
Big Hole
Madison
Gravelly
Lima Tendoy
Jackson
West Big
Hole Flats
West
Bighole
N
Miles
1 0 1 2 3 4 5
Selway-Saginaw
See Lima Tendoy Landscape
for MA Direction
Horse Prairie North
See Lima Tendoy Landscape
for MA Direction
Grant

BIG HOLE LANDSCAPE

The forest provides a scenic backdrop of rugged mountains above the Big Hole Valley, where traditional ranching contributes a pastoral element to the overall character of the landscape. Lodgepole pine is the most common species on the BDNF though all typical conifers are represented. Wet meadows, aspen, riparian areas, sagebrush grasslands, and areas burned by wildfires add variety to this mostly forested area. The length of the continental divide contributes large secure areas of high elevation habitat for wildlife. Mountain goats, moose, and elk inhabit this landscape.

The landscape has sections of the Nez Perce National Historic Trail, Lewis and Clark National Historic Trail, and Continental Divide National Scenic Trail, and the entire length of the May Creek National Recreation Trail. A large part of the Anaconda Pintler Wilderness is within the landscape, with several access points available along the southern wilderness boundary.

Divide, Dewey, Wise River, Wisdom, and Jackson are located on the fringe of the Big Hole Landscape. The BDNF provides important benefits like products for fences, firewood, small logs, and livestock grazing. It contributes to tourism business opportunities as well as recreation.

Streams feed into the Big Hole River, a nationally renowned class one trout stream and important grayling habitat. Water management in the Big Hole is important for fish habitat, sporting opportunities, irrigation, and the Butte municipal water supply. Timber harvest activities are concentrated in a few areas. Ranches depend on summer forage on National Forest pasture. Parts of the landscape are highly mineralized, and mining is a part of historic and present use in Ruby Creek and other isolated locations.

The Continental Divide and Anaconda Pintler Wilderness provide special recreation opportunities in this landscape. There are many high mountain lakes, some may be driven to and some allow electric motors. Hunting and fishing are important locally and nationally. Recreation sites provide dispersed camping and day use opportunities along Forest roads. Summer horse back and hiking trips are popular along the Continental Divide and in the Anaconda Pintler Wilderness.

The consistently high snowfall, terrain, and winter climate make this a great place for outdoor winter recreation. Chief Joseph Cross-country Ski Area provides groomed trails. Plowed parking lots provide access to popular snowmobiling, backcountry skiing, and other winter uses.

Adjacent areas offer additional opportunities such as the Big Hole Battlefield National Park, Mount Haggin State Wildlife Management Area, Mount Haggin Cross-Country Ski Trails, snowmobile trails with parking, and Lost Trail Winter Sports (Ski) Area.

Anaconda-Pintler Recommended Wilderness Additions Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Inholding
- 0% Wilderness
- 100% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 44% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

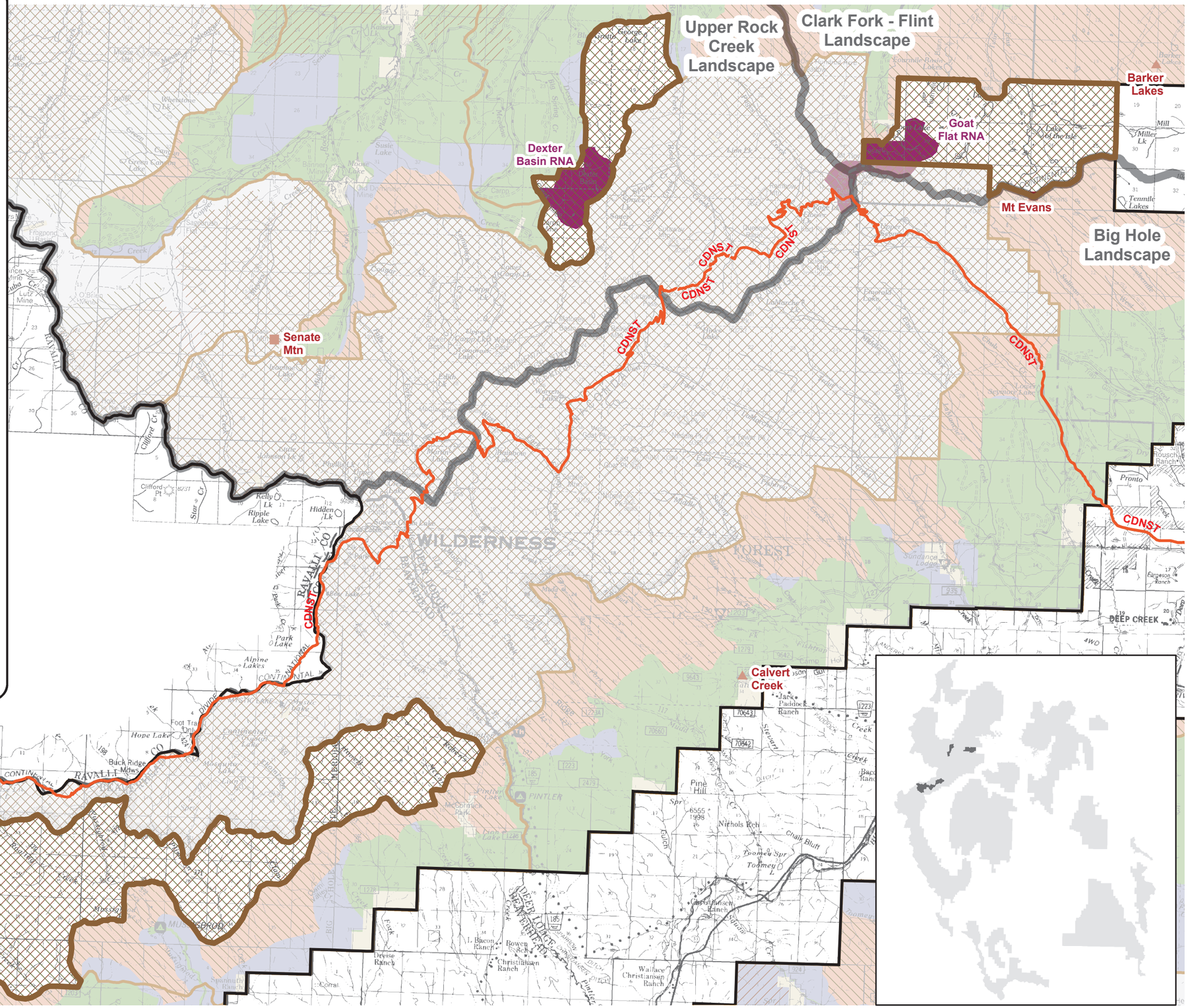
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Anaconda Pintler Recommended Wilderness Additions Management Area

This area is managed to protect wilderness characteristics and provide non-motorized recreation with a high level of challenge and solitude.

There are three separate areas in this recommended wilderness, the Hellroaring, Storm Lake, and the East Fork units with semi-primitive non-motorized recreation settings. Local residents and tourists use stock or hike to camp, hunt, or fishing at alpine lakes.

Vegetation is managed primarily through prescribed and natural fire.

Plimpton, Twin Lakes, and Meadow-Philipsburg watersheds are managed to conserve native fish populations. Seymour creek is managed to restore desirable watershed conditions.

Visitors may encounter

Native vegetation changes from fire and other natural events

Quiet natural landscapes and few visitors

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Very High

Management changes if released from wilderness designation

All three units:

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

Semi-primitive non-motorized summer and a mix of motorized and non-motorized in winter - as mapped in Alternative 1

Anaconda-Pintler Wilderness Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Inholding
- 100% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 41% Fisheries Key Watersheds
- 7% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Upper Rock Creek Landscape

Clark Fork - Flint Landscape

Big Hole Landscape

Barker Lakes

Mt Evans

Goat Flat RNA

Dexter Basin RNA

Senate Mtn

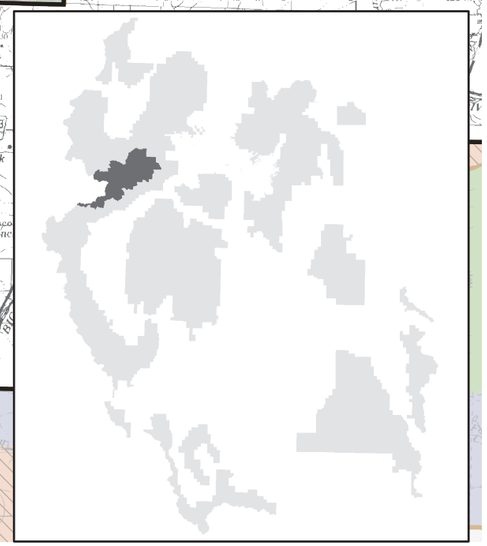
Calvert Creek

CDNST

WILDERNESS

FOREST

DEEP CREEK



Anaconda Pintler Wilderness Management Area

This area is managed to protect wilderness characteristics and values and provide primitive recreation with high levels of challenge and solitude.

The Anaconda-Pintler Wilderness, including lands on the Bitterroot National Forest, was designated in 1964 by Congress as a part of the National Wilderness Preservation System. The area provides primitive and semi-primitive non-motorized recreation settings. Local residents and destination tourists use stock or hiking to travel into or though the areas. Opportunities to camp, hunt, and fish at alpine lakes are available. Guided trips are available from local private outfitters.

Vegetation is managed primarily through prescribed and natural fire. Carpp Creek, Copper Creek, Falls Fork and Plimpton Creek are managed to conserve native fish populations. Most active watershed restoration takes place in the lower reaches of Sullivan Creek key restoration watershed. See the 2002 A-P Wilderness Plan or subsequent revisions for additional direction.

Visitors may encounter

Native vegetation changed only by fire and other natural events

Quiet natural landscapes and few other visitors

Pack Stock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Very High

Motorized vehicles are prohibited

Mountain bikes are prohibited

Timber harvest is not allowed

The Anaconda-Pintler Wilderness Plan provides additional standards

Anderson Mountain Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 96% Winter Motorized Travel Not Allowed

Recreation Allocations

- 18% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 100% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 96% Winter Non-motorized
- 4% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 16% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

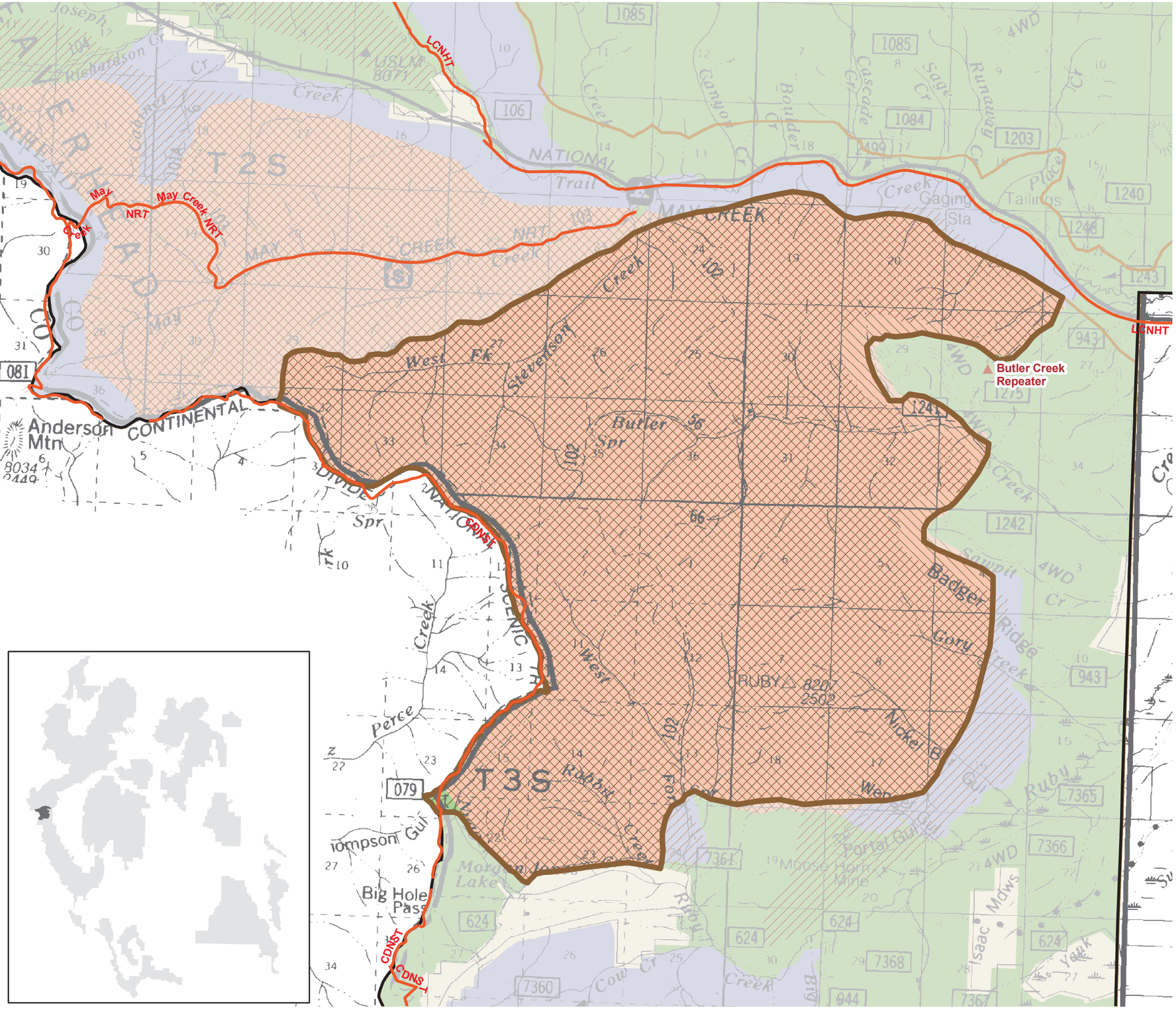
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Anderson Mountain Management Area

This area is managed to protect its undeveloped (roadless) character, provide secure habitat for wildlife along the continental divide and non-motorized recreation.

Recreation settings are semi-primitive with natural appearing scenery. A variety of non-motorized backcountry recreation opportunities are available in summer and winter. Snow cover in winter is quite deep.

Vegetation is managed primarily through prescribed and natural fire. Active restoration of Moosehorn Creek watershed takes place in the Ruby Management Area.

Visitors may encounter

Native vegetation changed only by fire and other natural events

Visitors on foot, horseback, bicycles or skis

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

Fishtrap-Mount Haggin Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 40% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 3% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 40% Summer Non-motorized
- 2% Backcountry Recreation
- 55% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 97% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 11% Fisheries Key Watersheds
- 34% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Dexter Basin RNA

Goat Flat RNA

Mt Evans

Calvert Creek

CDNST

WILDERNESS

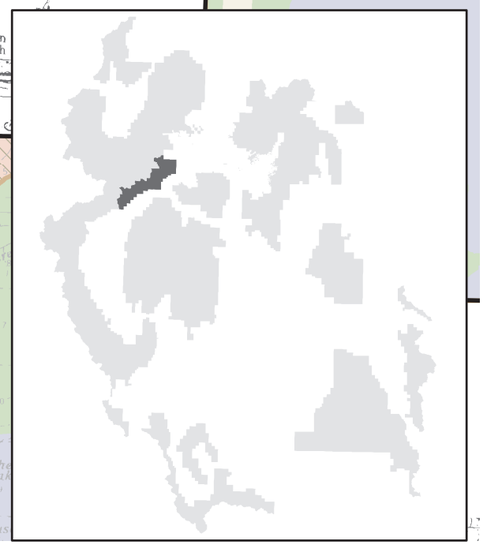
FOREST

PINTLER

DEEP CREEK

SPORTSMAN PARK

LOOKOUT



Fishtrap – Mount Haggin Management Area

This area is managed as a transition between the level of activity in the Big Hole Valley and the relative solitude of the Anaconda-Pintler wilderness. Developed and dispersed recreation sites compliment wilderness recreation opportunities.

Two fairly distinct areas of recreation settings are included. Summer non-motorized and undeveloped lands parallel the boundary of the Anaconda Pintler Wilderness, and provide wildlife habitat and quiet recreation. The area between the non-motorized area and private lands offer a roaded setting with developed and dispersed campsites, roads, and trails. Hunting, camping, ATV riding, bicycling, and horse riding are common activities. Snowmobile opportunities are available across the lower area though limited in some areas by terrain and vegetation. A winter non-motorized area adds to wildlife security provided by the adjacent wilderness.

Timber harvest and production may take place in the area, as well as livestock grazing. Deep Creek watershed is managed to conserve native fish populations. Sullivan and Seymour Creek are managed to restore desirable watershed conditions. Active restoration is most likely in the roaded parts of these two key watersheds.

Visitors may encounter

Vegetation changes as a result of timber harvest or fire

Motor vehicle and mountain bike riders on roads and trails in the foothills

Campers near roads and at developed campgrounds

Developed trailheads for access to the Anaconda Pintler Wilderness

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Pintler Face Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 49% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 5% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 49% Summer Non-motorized
- 22% Backcountry Recreation
- 24% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 95% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 46% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

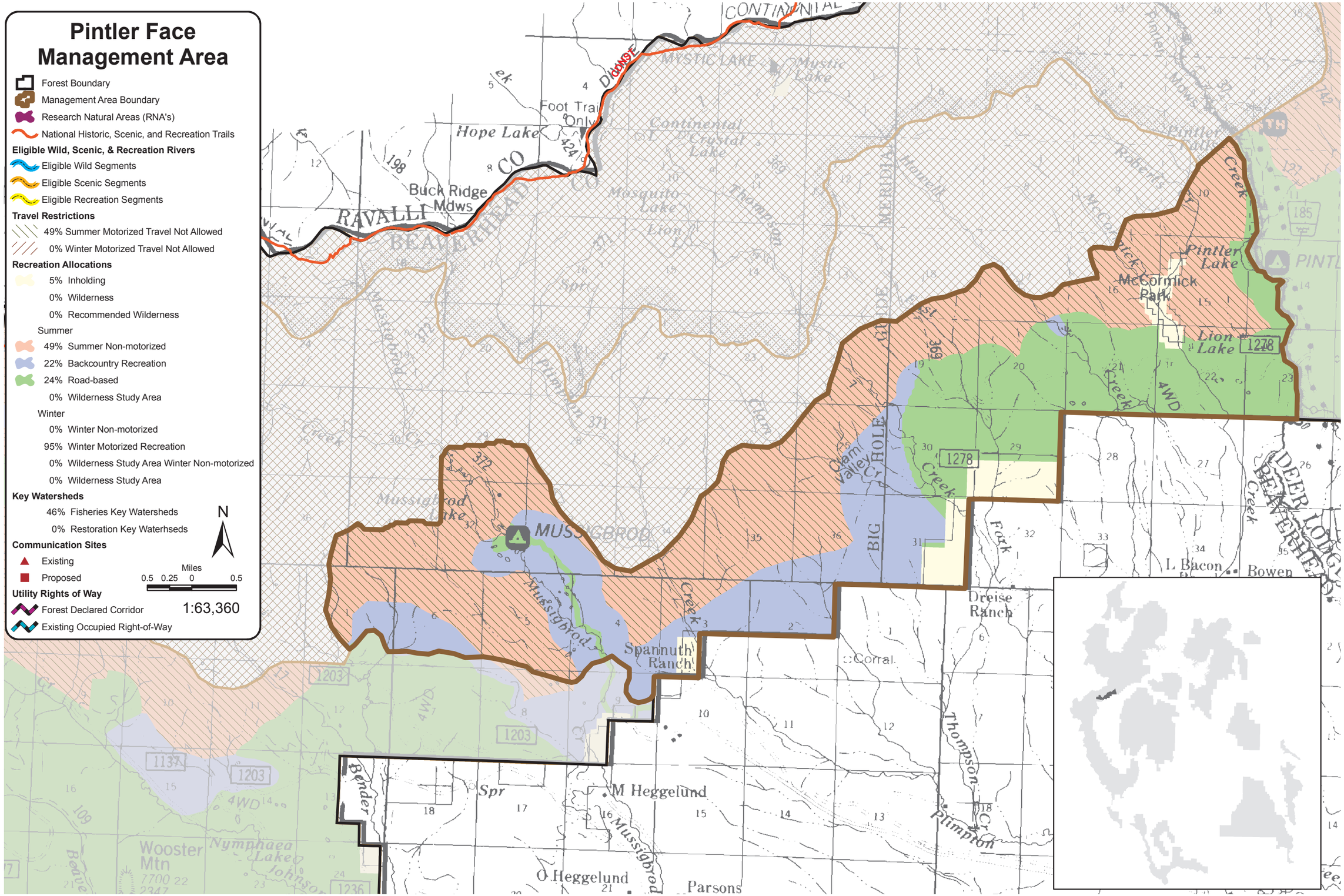
- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Miles

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Pintler Face Management Area

This area is managed as a transition between the Big Hole Valley and the Anaconda-Pintler Wilderness. Developed and dispersed recreation sites compliment wilderness recreation opportunities.

Two fairly distinct areas of management are included: summer non-motorized and undeveloped lands which parallel the Hellroaring part of the Anaconda Pintler recommended wilderness addition, and minimally roaded lands between the non-motorized areas and private lands. The non-motorized part provides horse riding, mountain biking, and hiking opportunities. The motorized part provides vehicle access to forest resources, roads and trails, Mussigbrod Lake Campground, and Wilderness trailheads. Mussigbrod horse camp facilities are popular for wilderness trips, particularly in hunting season. Popular snowmobile opportunities are available across the area though limited in some areas by terrain and vegetation.

Additional land uses include timber harvest and production, livestock grazing, and irrigation water storage at Mussigbrod Lake.

Plimpton watershed is managed to conserve native fish populations.

Visitors may encounter

Vegetation changes as a result of timber harvest or fire

Motor vehicle and mountain bike riders on roads and trails in the foothills

Campers dispersed along roads and at developed campgrounds

Developed trailheads for access to higher elevations

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Ruby Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 1% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 8% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 1% Summer Non-motorized
- 26% Backcountry Recreation
- 65% Road-based
- 0% Wilderness Study Area

Winter

- 7% Winter Non-motorized
- 85% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 31% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

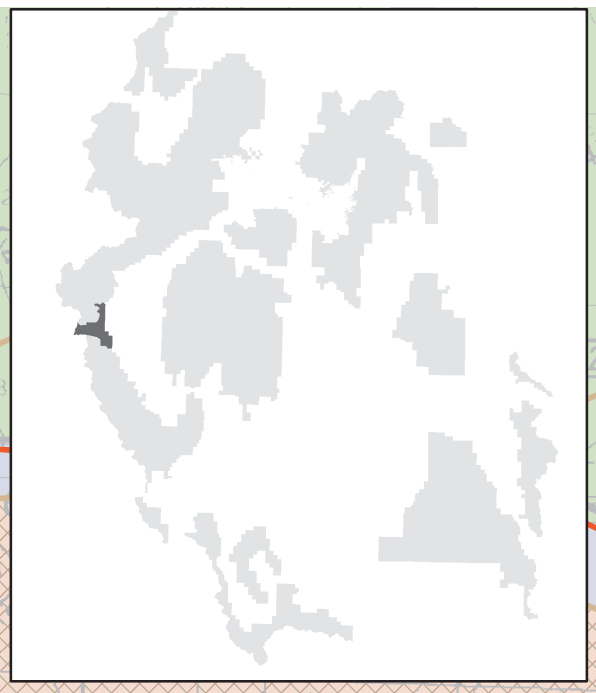
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Butler Creek Repeater

LCNHT TRAIL

CDNST

Ruby Ranch

Battle Mtn 7590 2313

Moose Horn Mine

Big Hole Pass

Morgan Lake

Cow Creek

Alpine Cr

Sheep Mtn

Opis Lake

Holland Lake

Portal Gulch

Badger Ridge

Sawpit Cr

Ruby Creek

Isaac Mdws

Swamp Creek

Moose Creek

Griffin Creek

Little Housetop Creek

Big Hole Mountains

T3S

T4S

1085 1276 1240 1246 1243 203 943 1242 1275 1241 079 078 624 7361 7360 71252 71253 71254 7365 7366 7368 7367 944 944A 944B 944C 944D 944G 944H 7362 7364 7363 71266

Ruby Management Area

This area is managed for vehicle access, timber products, livestock grazing, and dispersed recreation.

The area has a long history of use associated with travel across the Continental Divide, mining, in-holdings, and timber production. As one of Montana's first gold mining areas the original town site of Pioneer is historically significant. Private in-holdings originating from patented mining claims are scattered along the Gibbonsville Road, between Idaho and the Big Hole Valley. Mineral potential in the area is high.

A roaded setting is provided in most of the area, with a mix of natural appearing and modified appearing scenery. Common recreation activities include dispersed camping, driving or riding motorized vehicles, mountain biking, historic interpretation, or using the area to access non-motorized areas of the West Big Hole and Anderson Mountain areas. Much of the recreation use here comes from Idaho because it provides road access and winter deep snow for snowmobile opportunities close to Gibbonsville and Highway 93.

The backcountry area adjacent to the West Big Hole Special Management Area has a semi-primitive setting in summer to preserve its roadless qualities.

Active restoration of Moosehorn Creek key watershed takes place in this management area.

Visitors may encounter

Vegetation changes as a result of timber harvest or fire

Motor vehicles and mountain bike riders on roads and trails in the foothills

Campers dispersed along roads and at developed campgrounds

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

Protect and interpret sites around the Pioneer town site

Standards in addition to Forestwide Standards

None

South Fleecer Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 2% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 60% Backcountry Recreation
- 38% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 98% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 34% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

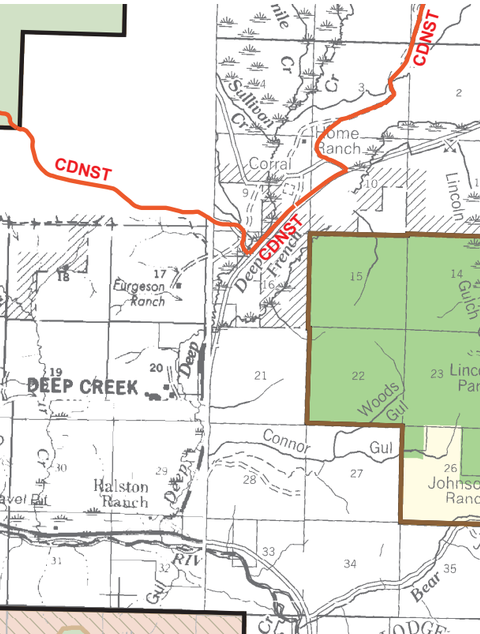
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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South Fleecer Management Area

This area is managed for dispersed recreation, livestock grazing, and other forest products.

The recreation settings include roaded and semi-primitive areas with mostly natural appearing scenery. Residents of Butte, Anaconda, Opportunity, and Wise River and others use the area for camping, hunting, ATV riding, mountain biking, and hiking. In fall additional walk-in hunting opportunities are provided to meet demand. In winter the area is popular for snowmobiling. Skiing and other non-motorized winter recreation use is incidental.

Other land uses include timber harvest and production. The adjacent Mount Haggin Wildlife Management Area, administered by Montana Fish, Wildlife, and Parks, makes the whole mountain range a large area of important habitat for elk and other wildlife.

Upper Jerry Creek watershed is managed to conserve native fish populations.

Visitors may encounter

Vegetation changes as a result of timber harvest or fire

Motor vehicle or mountain bike riders on roads and trails in the foothills

Campers dispersed along roads

Hunters

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

Improve motorized trail opportunities in summer.

Standards in addition to Forestwide Standards

None

Tie-Johnson Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 7% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 1% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 7% Summer Non-motorized
- 13% Backcountry Recreation
- 79% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 99% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

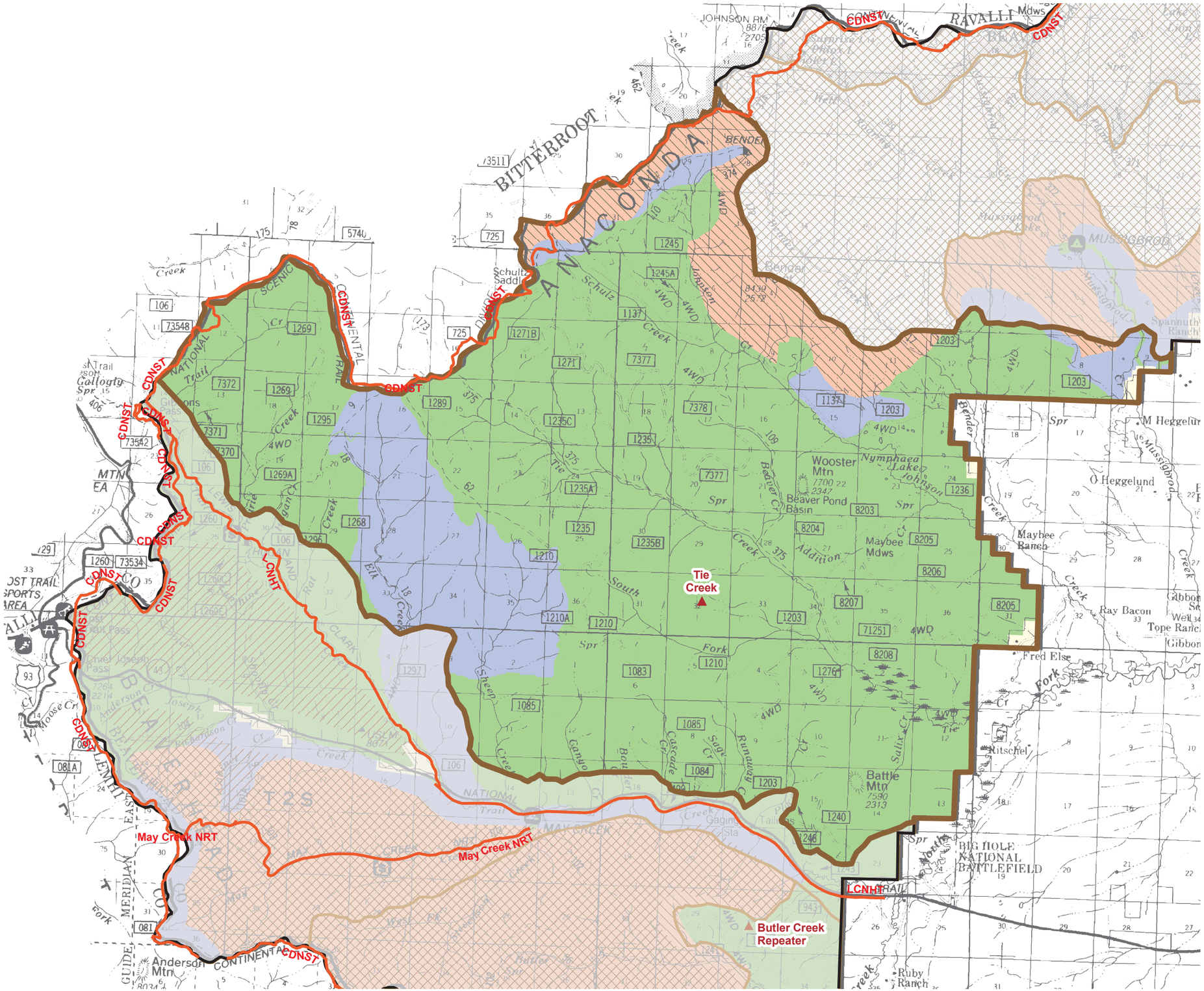
- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Tie - Johnson Management Area

This area is managed for timber production, livestock grazing, and dispersed recreation.

The recreation setting is mostly roaded with a mix of natural and altered appearing scenery. Areas burned by wildfires in 2000 and 2007 will dominate the scene for some time. Access for hunting, firewood cutting, fishing, summer drives, and winter snowmobiling are available from an existing road network. The Continental Divide National Scenic Trail follows the divide through this management area.

Exceptions to the setting include semi-primitive areas adjacent to the Anaconda Pintler Wilderness, where non-motorized recreation and ecosystem integrity are emphasized, and an area along Elk Creek managed to provide a mix of backcountry opportunities and to retain its roadless characteristics.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles and mountain bike riders on roads and trails

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

Develop a historic preservation plan for the traditional cultural property

Standards in addition to Forestwide Standards

None

Trail Creek Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 29% Summer Motorized Travel Not Allowed
- 52% Winter Motorized Travel Not Allowed

Recreation Allocations

- 1% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 29% Summer Non-motorized
- 19% Backcountry Recreation
- 51% Road-based
- 0% Wilderness Study Area

Winter

- 52% Winter Non-motorized
- 47% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

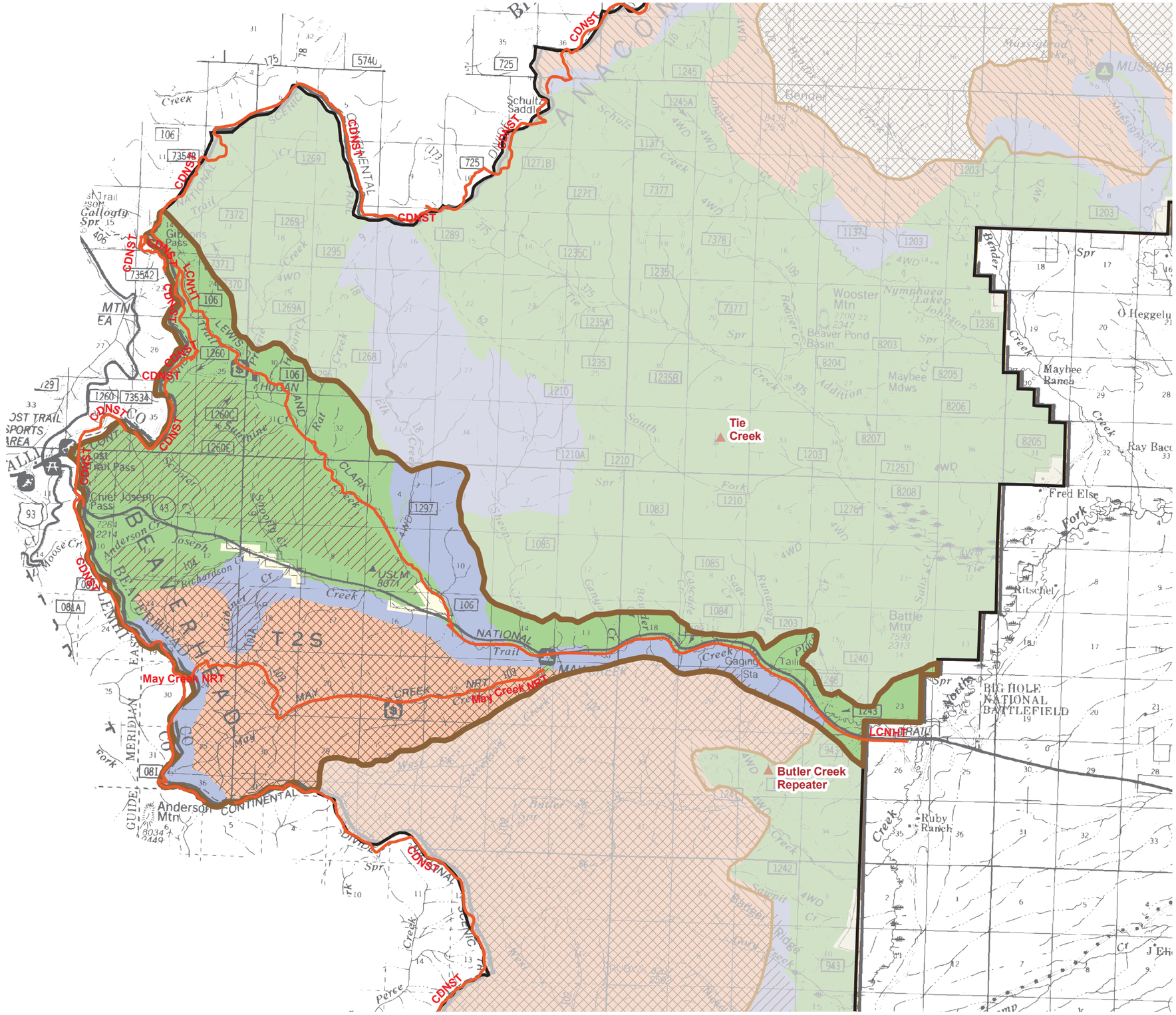
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Trail Creek Management Area

This area is managed for dispersed and developed recreation, for access to adjacent area recreation and management activities and to protect historic features.

Recreation takes place in roaded natural and semi-primitive settings. A concentration of nationally designated historic and recreation features with highway access contribute to the popularity of various motorized and non-motorized summer and fall hunting activities. Consistent deep snows with permanent plowed access on Highway 43 below the two divides at Lost Trail Pass and Chief Joseph Pass make this a high value winter sports area. Weekend and longer trips to the area are enhanced by the Forest Service cabin rental opportunities at Hogan, May Creek, and Gordon Reese Cabins.

The area provides high quality summer habitat for moose and other wildlife. Vegetation may be managed by fire or timber harvest to reduce fuels, or to provide wildlife habitat, recreation opportunities and other values.

Visitors may encounter

Vegetation changes from fire and timber harvest

A high density of recreationists, particularly at campgrounds and parking areas

ATV, horse, and mountain bike riders on trails and at dispersed sites

Snowmobilers and Skiers

Livestock

Objectives in addition to Forestwide Objectives

Develop an historic preservation plan for the traditional cultural property

Standards in addition to Forestwide Standards

The Chief Joseph cross-country ski area is closed to snowmobiling except for grooming

Commercial harvest of camas is prohibited

Minimum Scenic Integrity Objective - Moderate

West Big Hole Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 97% Summer Motorized Travel Not Allowed
- 62% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 97% Summer Non-motorized
- 3% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 62% Winter Non-motorized
- 38% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 5% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000

West Big Hole Management Area

This area is managed to protect its undeveloped (roadless) character, to provide challenging recreation opportunities in a remote alpine setting, and to provide secure wildlife habitat.

The recreation setting is semi-primitive. Non-motorized summer activities include hiking, stock travel, and mountain biking. Snowmobiling and cross-country skiing is provided in challenging high elevation settings. Historic mine sites are present.

An exception to the non-motorized setting is the motorized route to Ajax Lake.

Vegetation is managed primarily through prescribed and natural fire. Most active restoration of Moosehorn Creek watershed takes place in the Ruby management area. The area is grazed lightly by livestock

Undisturbed wildlife habitat is provided here along the continental divide summer long. Winter motorized closure of selected high elevation habitat provides security for wolverine and mountain goats.

Visitors may encounter

Vegetation changes only from fire and other natural events

Visitors on foot, stock, or mountain bikes

Snowmobilers and skiers

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

Timber harvest is not allowed.

West Big Hole Flats Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 12% Summer Motorized Travel Not Allowed
- 4% Winter Motorized Travel Not Allowed

Recreation Allocations

6% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

12% Summer Non-motorized
62% Backcountry Recreation
20% Road-based
0% Wilderness Study Area

Winter

4% Winter Non-motorized
90% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds
3% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 1 0.5 0 1

1:100,000

Darkhorse Lake

Bloody Dick Sno-tel

West Big Hole Flats Management Area

This area is managed for livestock grazing, developed and dispersed recreation, and timber production.

The recreation setting includes roaded and semi-primitive areas. Lakeside campgrounds are found at Twin, Miner and Van Houten Lakes. Motorized activities on roads and trails are common in summer and fall. Snowmobile and cross-country ski opportunities are popular across the winter motorized area except where limited by terrain and vegetation. Challenging winter ATV opportunities are also available.

Semi-primitive non-motorized settings are provided north and south of the Skinner Meadows area.

Active restoration of Saginaw Creek watershed takes place in this management area. The area is grazed lightly by livestock.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle and mountain bike riders on roads and trails in the foothills

Campers dispersed along roads and at developed campgrounds

Snowmobilers

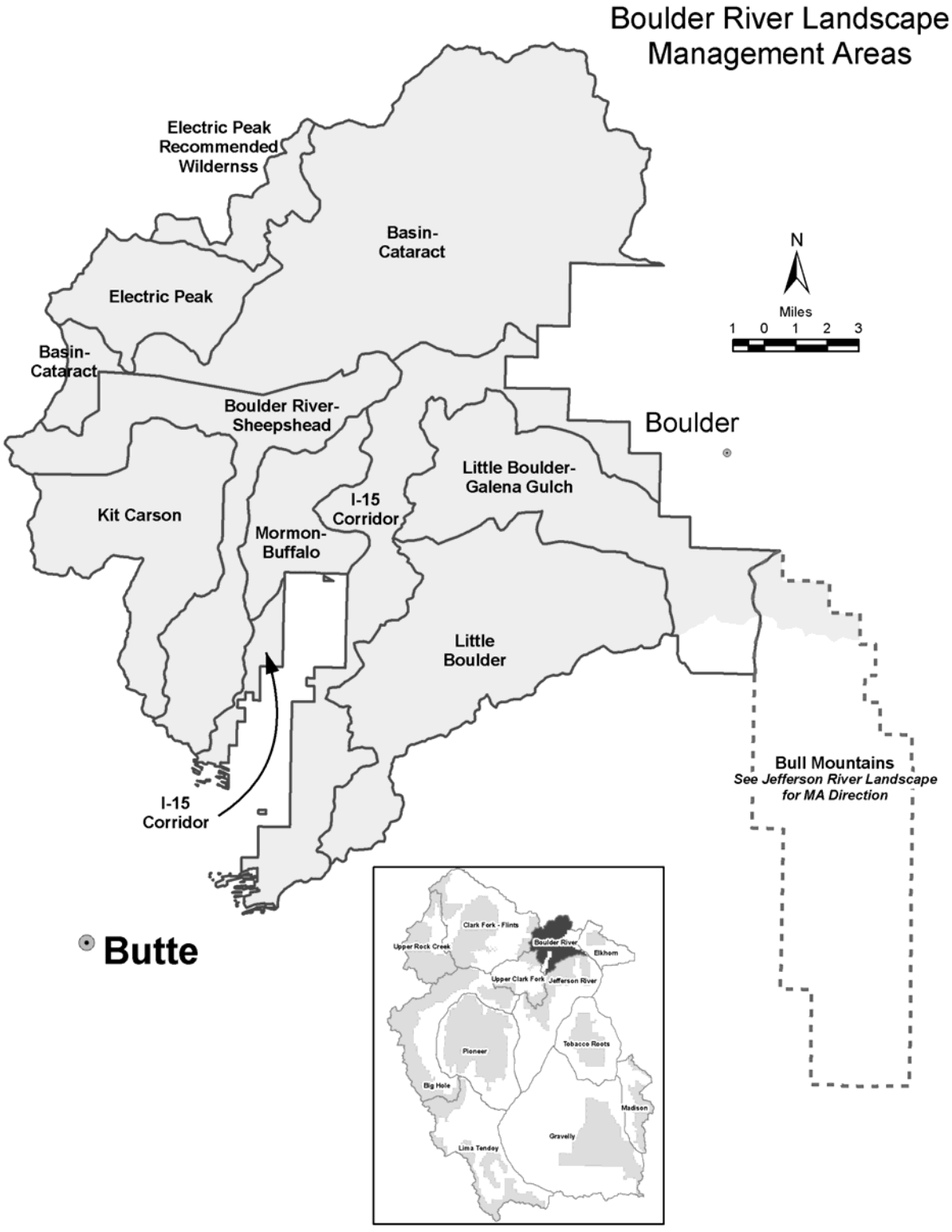
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


Boulder River Landscape
Management Areas
Electric Peak
Recommended
Wildernss
Basin-
Cataract
Electric Peak
Basin-
Cataract
Boulder River-
Sheepshead
Kit Carson
Mormon-
Buffalo
I-15
Corridor
Little Boulder-
Galena Gulch
Little
Boulder
Boulder
N
Miles
1 0 1 2 3
Bull Mountains
See Jefferson River Landscape
for MA Direction
I-15
Corridor
Butte
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Tobacco Roots
Pioneer
Big Hole
Madison
Gravelly
Lima Tendoy

BOULDER RIVER LANDSCAPE

The landscape includes the upper Boulder River watershed from the Continental Divide to the town of Boulder. Rolling mountains above narrow valleys are characteristic of the area. Coniferous forests occupy the uplands with grasslands in the foothill and along lower south and west facing slopes. Lodgepole pine forests are most common though Douglas-fir occupies dry sites. Elk are common.

The landscape has been changing since miners arrived in the 1860's. The entire area is favorable for metallic deposits, like the gold which originally attracted miners. A large number of patented claims remain within the exterior Forest boundary. Much of the land along the Boulder River Road is privately owned. Permanent residences are common in mixed ownership areas. Roads are dense in several parts of the area and were built to accommodate timber harvest, mining and access to private property.

Timber harvest and mining have and continue to modify the natural appearance of this landscape. Livestock grazing is another use as historically rooted here as mining and logging.

The citizens of Butte, Boulder, Basin, Deerlodge, and Helena consider this area as a part of their backyard. The landscape lends itself well to dispersing recreation, with many roads and trails on gentle terrain that accommodates motorized vehicles. The area receives heavy recreation use in winter, summer, and fall hunting seasons.

Basin-Cataract Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 2% Summer Motorized Travel Not Allowed
- 13% Winter Motorized Travel Not Allowed

Recreation Allocations

- 8% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 2% Summer Non-motorized
- 0% Backcountry Recreation
- 92% Road-based
- 0% Wilderness Study Area

Winter

- 13% Winter Non-motorized
- 79% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

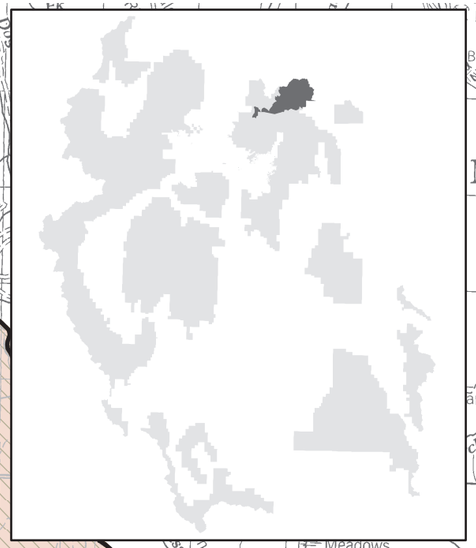
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 0.5 0 0.5 1

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Thunderbolt Mountain RNA

Jack Mountain

Bernice RNA Experimental Forest

Blizzard Hill

CDNST

Basin Cataract Management Area

This area is managed for timber production, livestock grazing and road based recreation. The recreation setting is mostly roaded natural, with altered areas showing its history and continuing use for timber harvest, mining, and utility corridors. Recreation use is fairly heavy in all seasons, especially on weekends. Many private land parcels are in the area, and are accessed by private or Forest roads.

An area of secure wildlife habitat lies in the South Fork of Basin Creek, Vacchio/Clay Creek and Three Brothers area remains unroaded. Winter forage and elk security are maintained on the Bernice winter range using a winter motorized travel closure.

Water quality is likely to improve from mine site reclamation. Hazardous mine waste from sites within and without of this landscape are stored in the Luttrell Repository.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicle riders on roads and trails year-round

Remnants of historic mining and current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Convert Basin Creek Campground to a dispersed camp site

Standards in addition to Forestwide Standards

No net increase in open motorized road and trails

Boulder River-Sheepshead Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 6% Summer Motorized Travel Not Allowed
- 27% Winter Motorized Travel Not Allowed

Recreation Allocations

- 18% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 6% Summer Non-motorized
- 0% Backcountry Recreation
- 76% Road-based
- 0% Wilderness Study Area

Winter

- 27% Winter Non-motorized
- 55% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

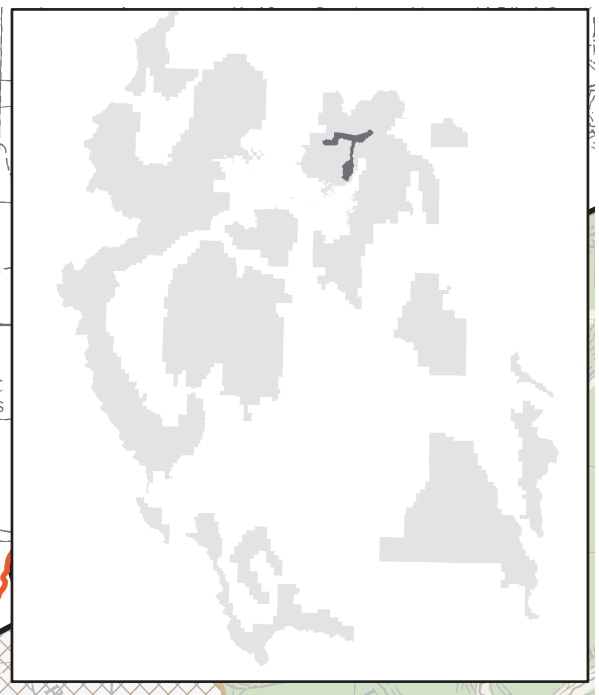
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000



Blackfoot Meadows
Cliff Mountain 8381
Thunderbolt Mountain RNA
Thunderbolt Mountain
CDNST
Blizzard Hill
Champion Pass
Powderhorn
Bernice RNA Experimental Forest
Kit Carson Pk
Haystack Mtn NRT
Maney Lake
Farcella Place
Tammietei Ranch
Lowland
Trask
Ice Pond
Sugarloaf Mtn 8263
Saratoga Mtn
Gospel Hill
Champion
Cottonwood Mtn
Four Corners
Deerlodge
Jefferson
Silver Bow
Irvine Ranch
Moulton Res No 1
Saratoga Mine
Iron Mountain
Fox Mtn
Cliff Lake
Bear Mtn
Nez
Bakers
Meadows
Boulder
Ramsey Gul
Ladysmith Creek
Cabin Cr
Meadows Cr
Trapper Creek
Cottonwood Cr
Kit Carson Gul Cr
Maney Creek
Lowland Creek
Trask Creek
Blackfoot
Larabee Gul
Conners Gul
No Grass Cr
Forbidding Ridge
Little Gul
Cliff Lake
Rock Fork
South Fork
North Fork
Rock Creek
Wood Creek
Frog Pond Road
Bison Gul
Busch Gul
Spruce Gul
Main
Water Tanks
Butcher
Rocky Can
Strozzy Gul
Cooney Gul
Browns Gulch
Alaska Gulch
American Gulch
Flume Gulch
Columbia Gulch
Swede Gulch
Olson Gulch
Haystack Mtn
Electric Ph
Leadville
Morning Star
Ferdinand
Lauderdale
Yankee Doodle
Lockhart
Northey
Taylor
Bear Creek
Sawmill Gulch
Whiskey Gulch
Jack Creek
Ice Pond
Sheepshead Mtn
Sugarloaf Mtn
Gospel Hill
Champion
Cottonwood Mtn
Four Corners
Saratoga Mtn
Saratoga Mine
Iron Mountain
Fox Mtn
Bear Mtn
Nez
Bakers
Ice Pond
Sheepshead Mtn
Water Tanks
Tammietei Ranch
Farcella Place
Maney Lake
Haystack Mtn NRT
BM 6103
BM 6344
BM 5755
BM 5808
BM 6408
8346
7346
6963
6961
6903
6344
7629
7735
4WD
WT

Boulder River - Sheepshead Management Area

This area is a travel corridor managed for road based recreation and access to forest resources.

Recreation takes place in a mix of roaded and rural settings which includes scenic views of the pastoral valley and hills with a forested mountain backdrop, remnants of historic mining and an electric transmission corridor. Recreation developments facilitate the area's heavy recreation use throughout the year. Snowmobiling, hunting, driving, and camping in summer and fall (both developed and dispersed) are among the most common recreational activities. Winter motorized use is constrained on big game winter.

Vegetation management includes livestock grazing and timber production. Winter forage and habitat security are maintained on big game winter range.

Visitors may encounter

Motor vehicle riders on a roads and trails year round

Hunters

Vegetation changes from timber harvest or fire

Livestock

Objectives in addition to Forestwide Objectives

Manage, harden, and designate dispersed recreation sites along the Boulder River and Lowland Roads

Adjust the number and location of developed recreation sites (trails, trailheads, and parking areas) to meet demand originating from access points in this corridor

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Electric Peak Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 91% Summer Motorized Travel Not Allowed
- 55% Winter Motorized Travel Not Allowed
- Winter Motorized Travel Not Allowed Exception

Recreation Allocations

- 0% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 91% Summer Non-motorized
- 9% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 55% Winter Non-motorized
- 45% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

0.5 0.25 0 0.5

1:63,360

Blackfoot Meadows
Cliff Mountain 8381
Sugarloaf Mtn 8263
Electric Pk 8346
Thunderbolt Mountain RNA
Thunderbolt Mountain
Cliff Lake
Leadville
Saratoga Mine
Donnell Mtn 5845
BM 5944
Saratoga Mtn 6963
Blizzard Hill
Bernice RNA Experimental Forest
CDNST
No Grass Cr
Forbidding Ridge
Little Rock Creek
Long Park
Schurbs Tunnel
Cold Spr
Dieders Creek
Continental Divide
Black Mtn 8001
Elk Gulch
Weasel Gulch
Bowers Cr
Fox Cr
Cottonwood Cr
Trapper Cr
Indian Cr
Cabin Cr
Rock Cr
Joe
Basin

Electric Peak Management Area

This area is managed to maintain the undeveloped (roadless) character, provide semi-primitive recreation and high elevation wildlife habitat.

The semi-primitive recreation setting includes natural appearing scenery with the exception of a few remnants of old mine adits. The area provides opportunities unique within the Boulder river drainage and close to Helena, Butte, Boulder, and Deerlodge for hiking, mountain biking, and riding horses in summer in a non-motorized setting.

Vegetation changes are mostly the result of fire and other natural processes. Livestock grazing is a minor use in the area. Travel closures protect high quality habitat for elk in summer and fall, and denning habitat for wolverine and other forest carnivores in winter.

Visitors may encounter

Vegetation changes from fire and other natural processes

Mountain bikers and hikers

Snowmobilers

Historic mining remnants

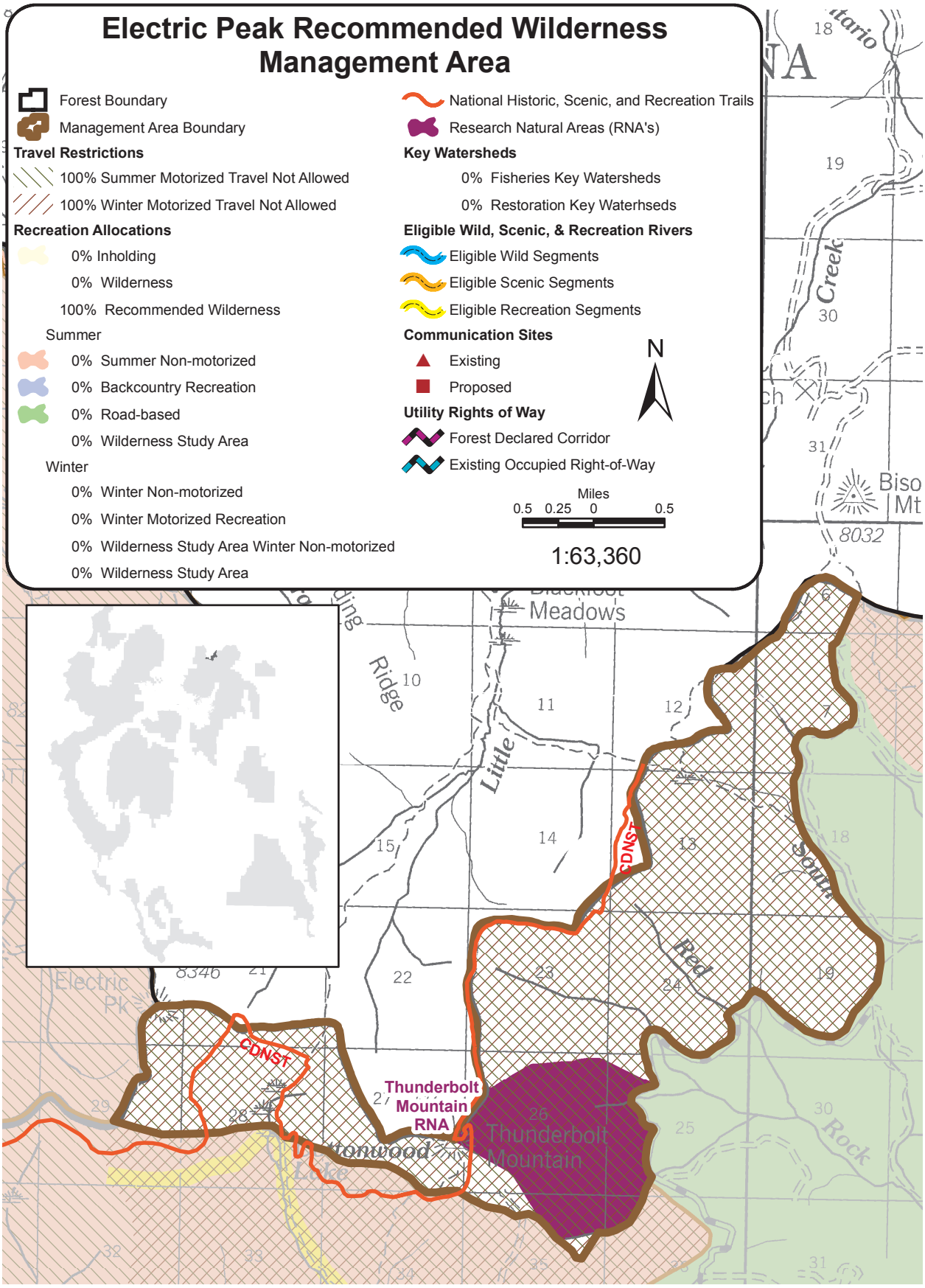
Objectives in addition to Forestwide Objectives

Restore closed motorized trails to a more natural condition

Standards in addition to Forestwide Standards

Snowmobiling is confined to designated routes.

Minimum Scenic Integrity Objective – High


Electric Peak Recommended Wilderness Management Area
Forest Boundary
Management Area Boundary
Travel Restrictions
100% Summer Motorized Travel Not Allowed
100% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Inholding
0% Wilderness
100% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
0% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
0% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
National Historic, Scenic, and Recreation Trails
Research Natural Areas (RNA's)
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
0.5 0.25 0 0.5
1:63,360
CONST
Thunderbolt Mountain RNA
Thunderbolt Mountain
Meadows
Ridge
Little
Red
Rock
Creek
Electric Pk
8346
8032
Biso Mt

Electric Peak Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and provide non-motorized recreation with a high level of challenge and solitude.

The recreation setting is semi-primitive and natural appearing. Electric Peak Recommended Wilderness provides one of the few unroaded, high quality areas of wildlife habitat in this landscape. It is also potential habitat for wolverines and other forest carnivores. The rugged Blackfoot Meadows area, recommended for wilderness by the Helena National Forest lies adjacent to the northern edge.

Vegetation is managed primarily through prescribed and natural fire. Ecosystem components are regulated by natural processes. Wildlife security is important along the top of this range.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes only from fire and other natural events. Recommended Wilderness: The setting is semi-primitive and natural appearing.

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

The minimum Scenic Integrity Level is Very High.

Management changes if released from recommended wilderness designation

Semi-primitive non-motorized allocations apply in summer and winter.

Minimum Scenic Integrity Objective – High

Mountain bike travel is allowed.

I-15 Corridor Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 26% Summer Motorized Travel Not Allowed
- 47% Winter Motorized Travel Not Allowed
- Motorized Travel Not Allowed Exception

Recreation Allocations

- 17% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 26% Summer Non-motorized
- 3% Backcountry Recreation
- 54% Road-based
- 0% Wilderness Study Area

Winter

- 47% Winter Non-motorized
- 36% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000

Jack Mountain

Galena

Haystack Mtn NRT

CDNST

Whitetail Rim

CDNST

Lost Park RNA

I-15 Corridor Management Area

This area is managed as a travel corridor, providing utility corridors, access and visitor dispersal to other parts of the landscape, and as a scenic backdrop for Interstate 15.

The recreation setting is a mix of roaded and semi-primitive with nearly natural appearing scenery. Vehicle access points are provided at the interstate highway exits. Recreation developments on private lands are supported by the scenery and opportunities for a wide range of dispersed activities in this area and other parts of the Boulder and Jefferson Landscapes.

Yearlong and seasonal motorized closure areas are found either side of the interstate provide secure areas for the large elk herds found in the vicinity.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle riders on roads and trails year-round

Historic mining remnants, current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Reduce risk of wildfire near Basin through vegetation treatments

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Kit Carson Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 21% Winter Motorized Travel Not Allowed

Recreation Allocations

- 3% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 97% Road-based
- 0% Wilderness Study Area

Winter

- 21% Winter Non-motorized
- 76% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

0.5 0.25 0 0.5

1:63,360

Bernice RNA
Experimental
Forest

Kit Carson Pk

CDNST

Champion Pass

Powderhorn

Meadows

Boulder Cr

Lockhart

Northey

Gul

WT

Kit Carson Gul Cr

Ferdinand Gul

Moraine

Main

Swede Gul

Olson

Irvine Ranch

Maney Lake

Sheepshead Mtn

Farcella Place

Tamietei Ranch

STANDARD

JEFFERSON

South

DEERLODGE CO

SILVER BOW

Four Corners

North Fork

Dry Fork

Ruby Cr

Telegraph Gulch

Cooney Gul

Water Tanks

4WD

BM 5781

BM 6103

6961

7346

BM 5441

7730

Kit Carson Management Area

This area is managed for timber production and road based recreation.

The recreations setting is mostly roaded, and includes areas where timber harvest or mining dominate the area's appearance. Hunting, riding ATVs and motorcycles, camping, and snowmobiling are common activities. The northeastern corner of the area is big game winter range, and closed to motorized activities in winter.

Vegetation management includes timber production and some livestock grazing.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicle riders on roads and trails year-round

Historic mining remnants, current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Little Boulder Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 57% Summer Motorized Travel Not Allowed
- 51% Winter Motorized Travel Not Allowed

Recreation Allocations

- 3% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 57% Summer Non-motorized
- 40% Backcountry Recreation
- 1% Road-based
- 0% Wilderness Study Area

Winter

- 51% Winter Non-motorized
- 46% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 38% Fisheries Key Watersheds
- 33% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000

Jack Mountain

Galena

Haystack NRT Mtn

Haystack Mtn NRT

CDNST

Whitetail Rim

Little Boulder Management Area

This area is managed to protect its undeveloped (roadless) qualities, provide non-motorized and other backcountry recreation, and for livestock grazing.

Recreation settings are mostly non-motorized and other backcountry, with a utility corridor and the Little Boulder road dissecting the area. Some activities in this uncrowded setting are dispersed camping, hiking, horseback riding, ATV riding, groups gathering at the Elder Creek Picnic Area, and snowmobiling in areas open to winter motorized activities. Big game winter range is closed to motorized activities in winter

Other land uses include livestock grazing. Natural processes are the most common agents of change in forested areas, though some vegetation may be managed with fire or small areas of timber harvest. Restoration activities may take place in the North Fork and Lower Little Boulder restoration key watersheds. Upper Little Boulder watershed is managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Hikers in non-motorized areas and vehicles in motorized areas

Historic mining remnants and current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Expand summer non-motorized opportunities along the CDNST

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Little Boulder-Galena Gulch Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 17% Winter Motorized Travel Not Allowed

Recreation Allocations

- 1% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 99% Road-based
- 0% Wilderness Study Area

Winter

- 17% Winter Non-motorized
- 82% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 49% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

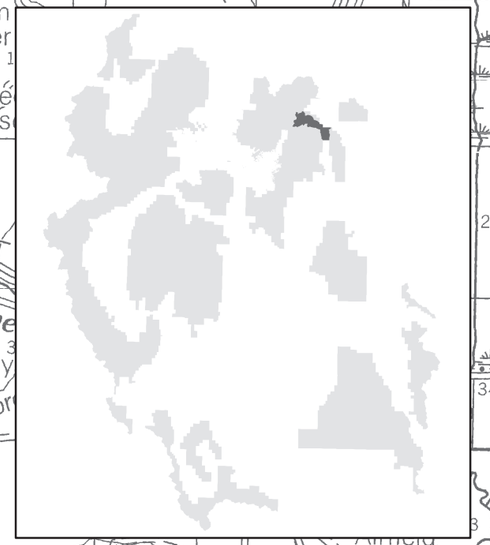
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

0.5 0.25 0 0.5

1:63,360



Haystack Mtn NRT

Haystack Mtn NRT

Galena

BM 5239

BM 5519

BM 6252

Little Boulder-Galena Gulch Management Area

This area is managed for timber production, livestock grazing, and motorized recreation opportunities.

The recreation setting is roaded natural and modified. Mining activities and timber harvest are visible along the dense road network. The area serves as a backyard for residents of Basin and Boulder, who use the area primarily for hunting, ATV riding, and hunting. The northern portion of the area is big game winter range, and closed to motorized activities in winter

Vegetation is managed for and using timber harvest, livestock grazing, and fire. Winter forage and security for elk are maintained on the Galena winter range. Mining and stream reclamation are possible. Restoration activities will take place in Little Boulder and Beaver Creek restoration key watersheds.

Visitors may encounter

Vegetation changes from timber harvest or fire

Timber harvest and roads

Motor vehicle riders on roads and trails

Historic mining remnants and current mining activity or reclamation

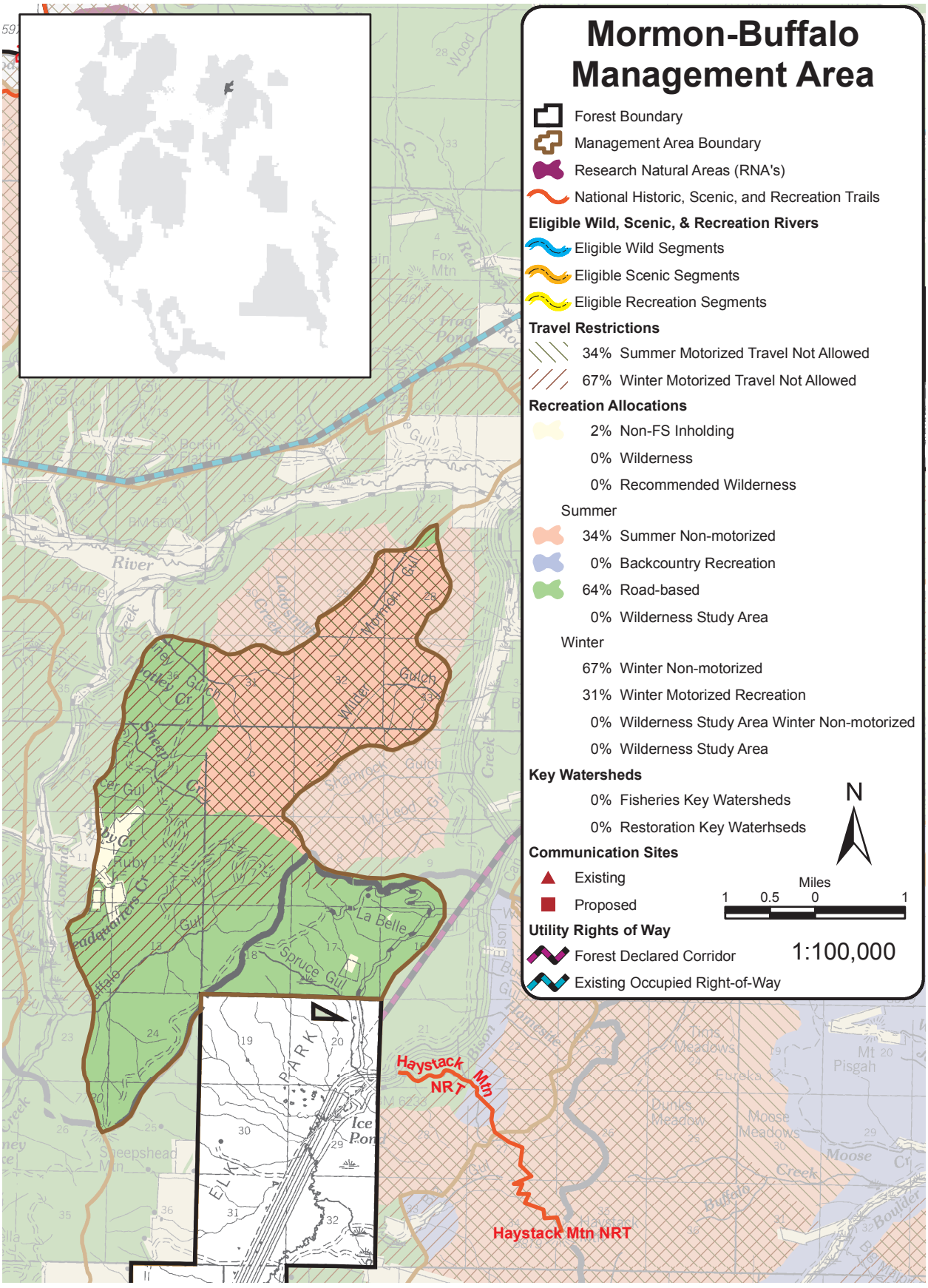
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


Mormon-Buffalo Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
34% Summer Motorized Travel Not Allowed
67% Winter Motorized Travel Not Allowed
Recreation Allocations
2% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
34% Summer Non-motorized
0% Backcountry Recreation
64% Road-based
0% Wilderness Study Area
Winter
67% Winter Non-motorized
31% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000
Haystack NRT
Haystack Mtn NRT
La Belle
Spruce Gul
Ice Pond
PARK
Sheepshead Mtn
Fox Mtn
Frog Pond
Mt Pisgah
Eureka
Dunks Meadow
Moose Meadows
Moose Creek
Buffalo Creek
Boulder
Bison
Ruby Cr
Sheep Gul Cr
Headquarters Cr
Little
Winter Gulch
Ramsey Creek
Berlin Flat
Wood
Cr
River

Mormon Buffalo Management Area

This area is managed for timber production, grazing, mining, and wildlife habitat.

The south end of the area has a road based recreation setting, with high concentrations of roads and an altered appearance from timber harvest and mining. The area is used for firewood cutting, driving, snowmobiling, and other activities. The north end includes summer and winter motorized closures for elk security, and provides hiking opportunities.

Visitors may encounter

Vegetation changes from timber harvest or fire

Timber harvest and roads

Motor vehicle riders on roads and trails year-round

Historic mining remnants and current mining activity or reclamation

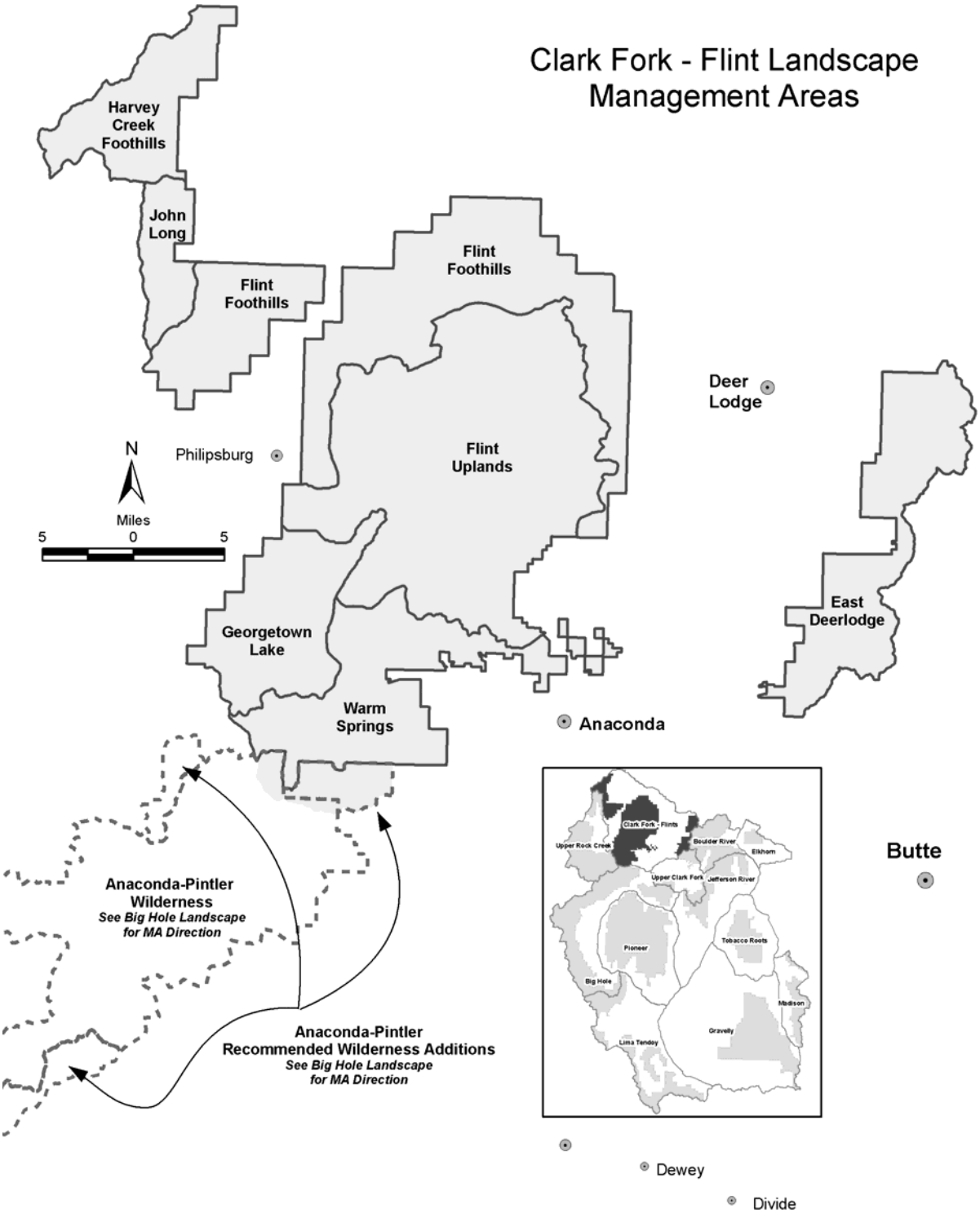
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


Clark Fork - Flint Landscape
Management Areas
Harvey
Creek
Foothills
John
Long
Flint
Foothills
Flint
Foothills
Flint
Uplands
Deer
Lodge
N
Philipsburg
Miles
5
0
5
East
Deerlodge
Georgetown
Lake
Warm
Springs
Anaconda
Butte
Anaconda-Pintler
Wilderness
See Big Hole Landscape
for MA Direction
Anaconda-Pintler
Recommended Wilderness Additions
See Big Hole Landscape
for MA Direction
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Pioneer
Tobacco Roots
Big Hole
Madison
Gravelly
Lima Tendoy
Dewey
Divide

CLARK FORK FLINT LANDSCAPE

The rocky peaks of the Flint Creek and Anaconda Mountain Ranges are dominant features of this landscape, towering above the broad Deer Lodge and Flint Creek Valleys. The overall pattern of mountain vegetation is coniferous forests, meadows, and aspen groves. Small stands of western larch and ponderosa pine are indicative of the difference in vegetation and climate on the western side of the Divide. The broad valleys are open grasslands with alfalfa fields and croplands in lower elevations and transitional vegetation including aspen along the foothills and in moist draws. This landscape includes and supports moose, bighorn sheep, mountain goats, large herds of elk, and other wildlife species as well as rare plants. Tributaries to the Clark Fork Watershed are found here. These waters flow to the Columbia River and Pacific ocean. Many provide habitat for bull trout and westslope cutthroat trout.

Traveling through the valley bottoms, one sees ranch building sites, fences, hay meadows, and haystacks as well as cattle and horses, which add to the picturesque landscape below the forested mountains and rocky peaks. Remnants of the mining culture that once dominated and continues to contribute to the cultural features of the area are still visible and in some cases visually dominate the valleys and hillsides. The Anaconda Smelter Stack, no longer in use, is still visible along the skyline above Anaconda.

Management of watersheds here is directed by decisions made for the protection of anadromous fish in the Columbia River Basin. Even so, the area continues to provide timber for local markets.

Recreation use in this landscape varies from the developed high-density use around Georgetown Lake and Discovery Basin Ski Area to the challenging backcountry uses of the Anaconda Pintler Wilderness. Georgetown Lake is a popular destination and summer home location for the Region. Developed camping, boat docks and commercial businesses cater to destination oriented tourists and local residents. The Flint Range offers a mix of motorized and non-motorized, summer, hunting season and winter use. It is the “backyard” of the communities of Anaconda, Deer Lodge, Drummond, Fairmont, Galen, Gold Creek, Hall, Maxville, Opportunity, Philipsburg, Warm Springs, and West Valley. Communities in Granite and Powell Counties rely on Forest products for nearly a third of their economic industry.

East Deerlodge Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 21% Summer Motorized Travel Not Allowed
- 8% Winter Motorized Travel Not Allowed

Recreation Allocations

- 16% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 21% Summer Non-motorized
- 1% Backcountry Recreation
- 62% Road-based
- 0% Wilderness Study Area

Winter

- 8% Winter Non-motorized
- 76% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 40% Fisheries Key Watersheds
- 12% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000

Blizzard Hill

Bernice RNA Experimental Forest

Kit Carson Pk

CDNST

DEERLODGE CO

JEFFERSON

BEAVERHEAD

East Deerlodge Management Area

This area is managed for timber production, livestock grazing, mining, and dispersed recreation.

The recreation setting is mostly roaded, and provides an abundance of varied motorized opportunities. The history of commodity production in the area is reflected in the developed road systems. Recreation activities are mostly road oriented and dispersed. There are many opportunities to engage in recreational pursuits such as firewood cutting, weekend camping, fishing or hunting. The road links the Boulder River area to the Deerlodge Valley over Champion Pass. Recreation opportunities include Orofino Campground and Picnic Area, and the Orofino Snowmobile Shelter along the Deerlodge Snowmobile Trail System.

The semi-primitive summer non-motorized area on the north end is an exception to the setting which compliments the non-motorized opportunities in the adjacent Electric Peak and Blackfoot Meadows undeveloped areas.

Big game winter range at low elevations north of Orofino is protected by motorized closures in winter. The north end contributes wildlife security to the Electric Peak and Blackfoot Meadow areas. Fred Creek (Cottonwood Creek) watershed is managed to conserve native fish populations. Girard Gulch is managed to restore beneficial watershed conditions.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicle and mountain bike riders on roads and trails year long

Snowmobiles on groomed trails

Historic mining remnants and current mining activity or reclamation

Livestock

Objectives in Addition to Forestwide Objectives

None

Standards in Addition to Forestwide Standards

None

Flint Foothills Management Area

Forest Boundary

Management Area Boundary

Travel Restrictions

3% Summer Motorized Travel Not Allowed

7% Winter Motorized Travel Not Allowed

Recreation Allocations

20% Inholding

0% Wilderness

0% Recommended Wilderness

Summer

3% Summer Non-motorized

1% Backcountry Recreation

77% Road-based

0% Wilderness Study Area

Winter

7% Winter Non-motorized

73% Winter Motorized Recreation

0% Wilderness Study Area Winter Non-motorized

0% Wilderness Study Area

Key Watersheds

21% Fisheries Key Watersheds

0% Restoration Key Waterhseds

National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

Eligible Wild Segments

Eligible Scenic Segments

Eligible Recreation Segments

Research Natural Areas (RNA's)

Communication Sites

Existing

Proposed

Utility Rights of Way

Forest Declared Corridor

Existing Occupied Right-of-Way

N

Miles

0.5 0 0.5 1 1.5

1:126,720

Silver King

Combination

Black Pine Lookout

Black Pine Sno-tel

Rumsey Mtn

Warm Springs

Flint Foothills Management Area

This area is managed for timber production, livestock grazing, and dispersed recreation.

The management area provides a roaded setting for recreation in a mix of altered and natural appearing scenery. The Flint Foothills form a scenic backdrop for Interstate 90 between Drummond and Butte and the Pintler Scenic Route from Drummond south of Philipsburg. The history of use and management is reflected in the developed road systems, historic mining sites, and scenery. Recreation activities are mostly dispersed, and most common on or near roads. Local and Regional visitors participate in firewood gathering, weekend camping, fishing and hunting.

The semi-primitive non-motorized area between Long Park and Tin Cup Joe Creek is an exception to the management area setting. Here hikers can access quiet areas in the higher elevations of the Flint Range. Winter non-motorized closures at low elevations along Flint Creek protect big game winter range.

Historic mining sites are scattered throughout the area on patented inholdings and mining activity continues in some locations. Recreation residence tracts are authorized near Princeton.

Bielenberg, Lower Boulder, and South Boulder watersheds are managed to conserve native fish populations. .

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicles on roads and trails year long

Historic mining remnants and current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Reduce fire risk near private residences in the Boulder Creek drainage through vegetation treatments

Standards in addition to Forestwide Standards

None

Flint Uplands Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 50% Summer Motorized Travel Not Allowed
- 21% Winter Motorized Travel Not Allowed

Recreation Allocations

- 5% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 50% Summer Non-motorized
- 15% Backcountry Recreation
- 30% Road-based
- 0% Wilderness Study Area

Winter

- 20% Winter Non-motorized
- 75% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 54% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
0.5 0 0.5 1 1.5

1:126,720

Racetrack Peak

Warm Springs

Rumsey Mtn

Lodgepole

NRT

Flint Uplands Management Area

This area is managed for a mix of semi-primitive motorized and non-motorized recreation and secure high elevation wildlife habitat.

The recreation setting is a mix of semi-primitive motorized and non-motorized areas with natural appearing scenery. The high mountain lakes, scenic vistas, and backcountry opportunities are key attractions supported by the mix of motorized and non-motorized low standard road and trail opportunities. Access in this unit is primarily by historic roads built for mining and dam maintenance. Lost Creek, acquired through land exchange, provides a non-motorized experience year round in a unique geologic setting adjacent to Lost Creek State Park.

Vegetation is managed primarily through prescribed and natural fire with exceptions in roaded settings where some harvest may take place. Any active watershed restoration takes place mostly in the lower reaches of key watersheds in the Flint Foothills or Warm Springs Management Areas. Motorized closure of selected high elevation habitats protects summer wildlife security and winter habitat, primarily for mountain goats and forest carnivores.

Boulder, Copper-Boulder, South Boulder, Racetrack, Warm Springs and Foster Creek are managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on some roads and trails

People on foot, stock, mountain bikes, or skis

Livestock

Objectives in addition to Forestwide Objectives

Classify some low standard roads as motorized trails

Maintain historic motorized access to irrigation lakes and dams

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Georgetown Lake Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 19% Winter Motorized Travel Not Allowed

Recreation Allocations

- 47% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 2% Backcountry Recreation
- 51% Road-based
- 0% Wilderness Study Area

Winter

- 19% Winter Non-motorized
- 34% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0

1:100,000

Warm Springs
Rumsey Mtn
Lodgepole
NRT
DNRC
Windy Ridge RNA
Petersen Meadows
Goat Flat RNA
Barker Lakes

Georgetown Lake Management Area

This area is managed for developed water based recreation, trail opportunities, and winter sports.

The recreation setting is a mix of rural and roaded natural with a natural appearing backdrop. Recreation use is concentrated and heavy. This is a popular recreation destination because of Georgetown Lake, Echo Lake and Discovery Basin Ski Area. This area has the highest concentration of recreation development on the Forest with an alpine ski area, developed campgrounds, fishing, picnic areas, boat launches, interpretive sites, cross-country skiing and snowmobile trails. Ownership is mixed private and public land. Recreation residences under Forest Service permits line parts of the Georgetown and Echo Lake shorelines and adjacent subdivisions are growing. Winter non-motorized allocations provide quiet recreation opportunities near the ski area.

Vegetation management, including timber harvest, around Georgetown Lake and Echo Lake is for fuel reduction and to sustain developed recreation sites and keep them safe or for other resource objectives. Unique rough fescue grassland is protected at Windy Ridge Research Natural Area. Noxious weed control is a priority. Mature forests provide secure habitat for wildlife movement between the Flint and Pintler mountain ranges.

Visitors may encounter

Vegetation changes from timber harvest or fire

Numerous visitors particularly at Georgetown Lake and Discovery Basin

Motor vehicles on roads and trails in summer and fall

Snowmobilers and skiers

Livestock

Objectives in addition to Forestwide Objectives

Connect Georgetown and Red Lion snowmobile trail systems to create a loop

Offer hiking trail opportunities

Reduce risk of fire near private lands in mixed ownership areas and around developments on Forest Service land through vegetation treatments

Manage nutrient input into Georgetown Lake from Forest Service recreation activities and facilities

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Harvey Creek Foothills Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 32% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 11% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 32% Summer Non-motorized
- 24% Backcountry Recreation
- 33% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 89% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 98% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0

1:70,000

LOLO NATIONAL FOREST

(ADMINISTERED BY DEERLODGE N F)

JOHN LONG

LOOKOUT

Harvey Creek Foothills Management Area

This area is managed for native fish conservation and dispersed low density recreation.

Most of the area is on the Lolo National Forest but administered by the BDNF. The recreation setting is a mix of roaded and semi-primitive. A variety of motorized and non-motorized opportunities are available year around. Access to the area is limited and road densities low except on the periphery. Much of the non-motorized area is not accessed by trails. Most recreation use takes place in the fall. Hunters who prefer Harvey Creek are seeking rugged terrain and isolation for an opportunity to harvest trophy big game.

Vegetation is managed by timber harvest and fire. Additional land uses include livestock grazing, firewood gathering and mining.

Harvey Creek and Eightmile Creek are managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Light motor vehicle use on some roads and trails in summer, fall and winter

Visitors on foot or horseback especially in the fall

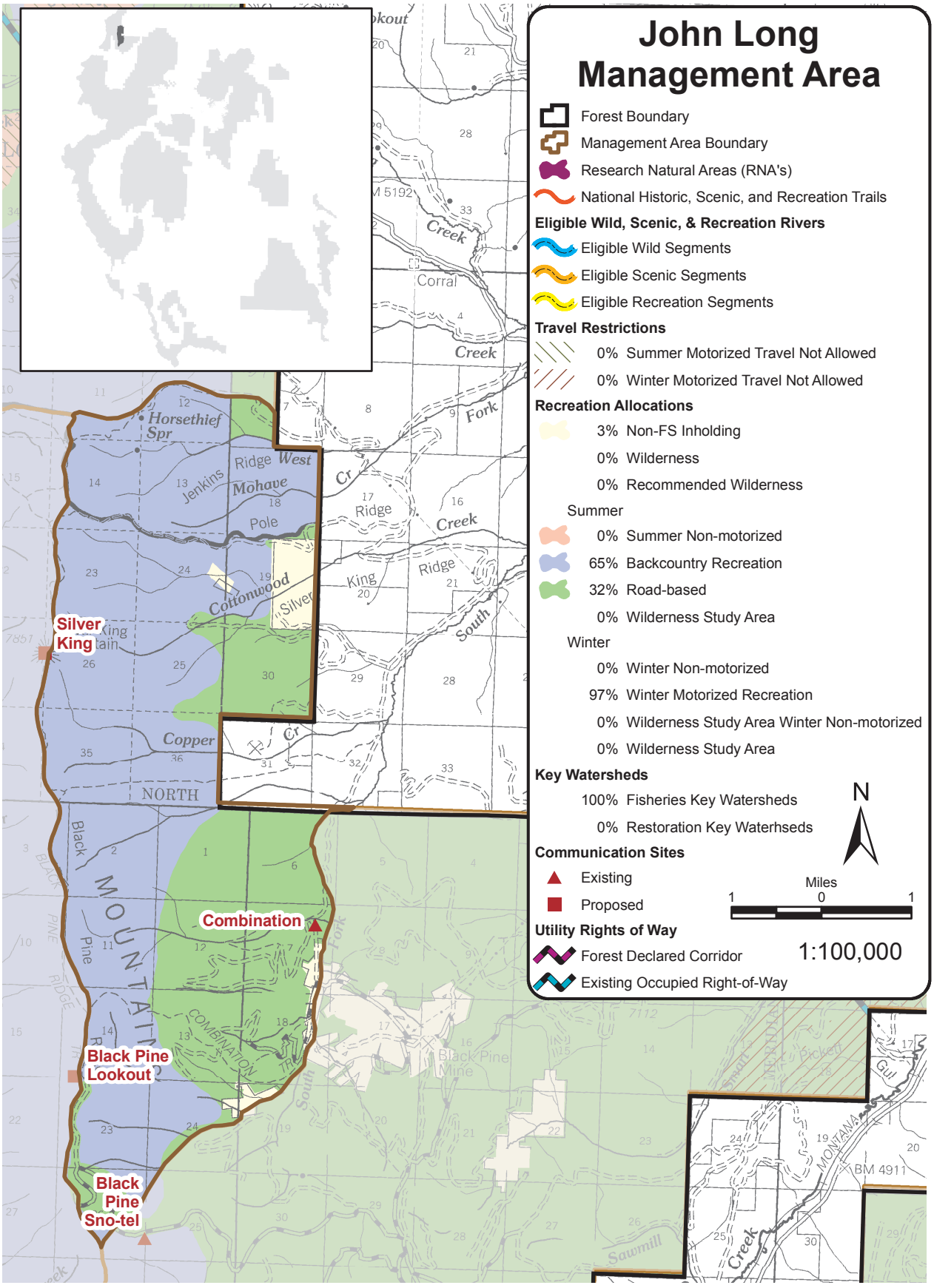
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


John Long
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
0% Winter Motorized Travel Not Allowed
Recreation Allocations
3% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
65% Backcountry Recreation
32% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
97% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
100% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0 1
1:100,000
Silver King
Combination
Black Pine Lookout
Black Pine Sno-tel
Horsethief Spr
Ridge West
Jenkins
Mohave
Pole
Cottonwood
Silver
King
Ridge
Creek
Fork
Corral
Copper
NORTH
MOUNTAIN
Black
Pine
COMBINATION TR
South Fork
Black Pine Mine
Sawmill
Creek
MONTANA
BM 4911

John Long Management Area

This area is managed for native fish conservation and low density backcountry recreation The recreation setting ranges from roaded in the southeast corner to semi-primitive in the remainder of the area. Mostly motorized trail opportunities are available. The road to Black Pine Ridge provides a scenic view of the valley, the rugged Quigg Peak area, and the Pintler Range. While there are no non-motorized allocations, much of the backcountry is non-motorized because it lacks access. The large blocks of undeveloped land with limited public access provide secure wildlife habitat year around.

Additional land uses include livestock grazing, firewood gathering and mining.

Cottonwood and South Fork Willow are fisheries key watersheds.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on some roads and trails in summer, fall, and winter

Hikers or mountain bikers

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Warm Springs Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 26% Summer Motorized Travel Not Allowed
- 13% Winter Motorized Travel Not Allowed

Recreation Allocations

- 7% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 25% Summer Non-motorized
- 1% Backcountry Recreation
- 67% Road-based
- 0% Wilderness Study Area

Winter

- 13% Winter Non-motorized
- 80% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 46% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 0.5 0 0.5 1

1:100,000

Warm Springs
Rumsey Mtn
Lodgepole NRT
DNRC
Petersen Meadows
Windy Ridge RNA
Barker Lakes
Goat Flat RNA
ANACONDA

Warm Springs Management Area

This area is managed for recreation, wildlife, and native fish conservation.

The recreation setting is mostly roaded with a mix of managed and natural appearing scenery. The Pintler Scenic Route takes travelers to the Georgetown Lake area. Scenery is important as the backdrop for both travel and destination recreation. Motorized and non-motorized recreation opportunities are available.

Recently acquired lands south of the highway have high densities of roads constructed for timber management. The higher elevations approaching the Continental Divide are semi-primitive non-motorized. South facing slopes at lower elevations are closed to winter motorized use for bighorn sheep winter range. Secure habitat for wildlife movement is available between the Pintler and Flint mountain ranges and for wintering bighorn sheep.

Additional land uses and activities include timber production and harvest, livestock grazing and road restoration, and recreation residence tracts. Noxious weed management is a priority along the scenic Highway 1 corridor.

Warm Springs, Foster Creek and Twin Lakes are fisheries key watersheds.

Visitors may encounter

Vegetation changes from timber harvest or fire

Many visitors particularly along the Pintler Scenic Route

Motor vehicles on roads and trails in summer and fall

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

Identify road and trail systems needed on lands in watershed acquisition and add them to the forest inventory. Schedule others for removal, decommissioning, or conversion to trails.

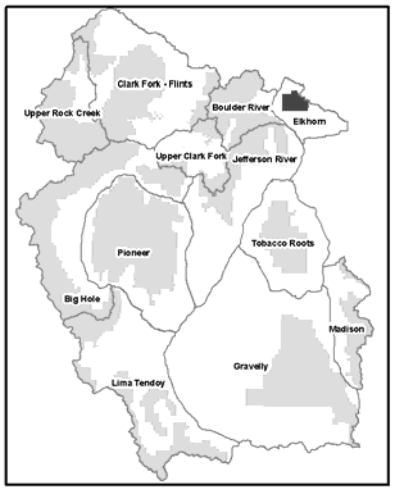
Reduce noxious weeds in bighorn sheep range to assure continued forage for wildlife.

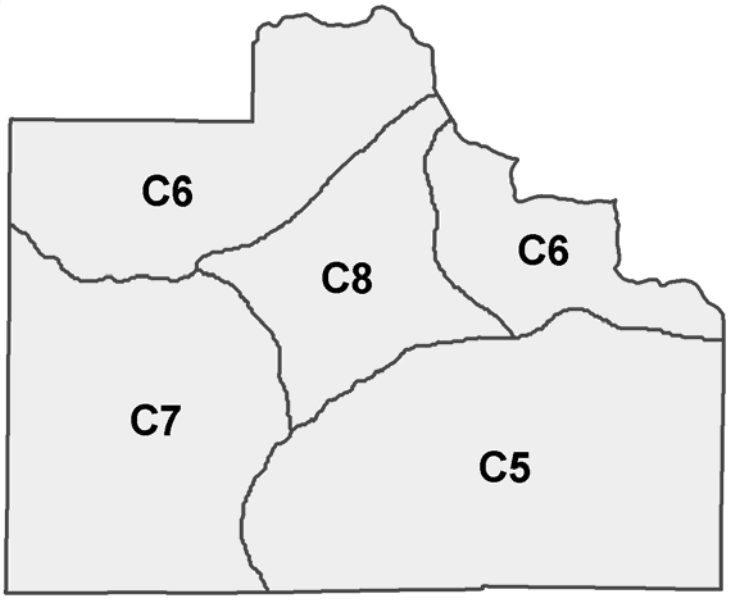
Establish an access route and wilderness trailhead below Storm Lake.

Standards in addition to Forestwide Standards

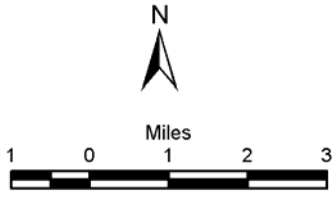
Minimum Scenic Integrity Objective - Moderate

Elkhorn Landscape Management Areas



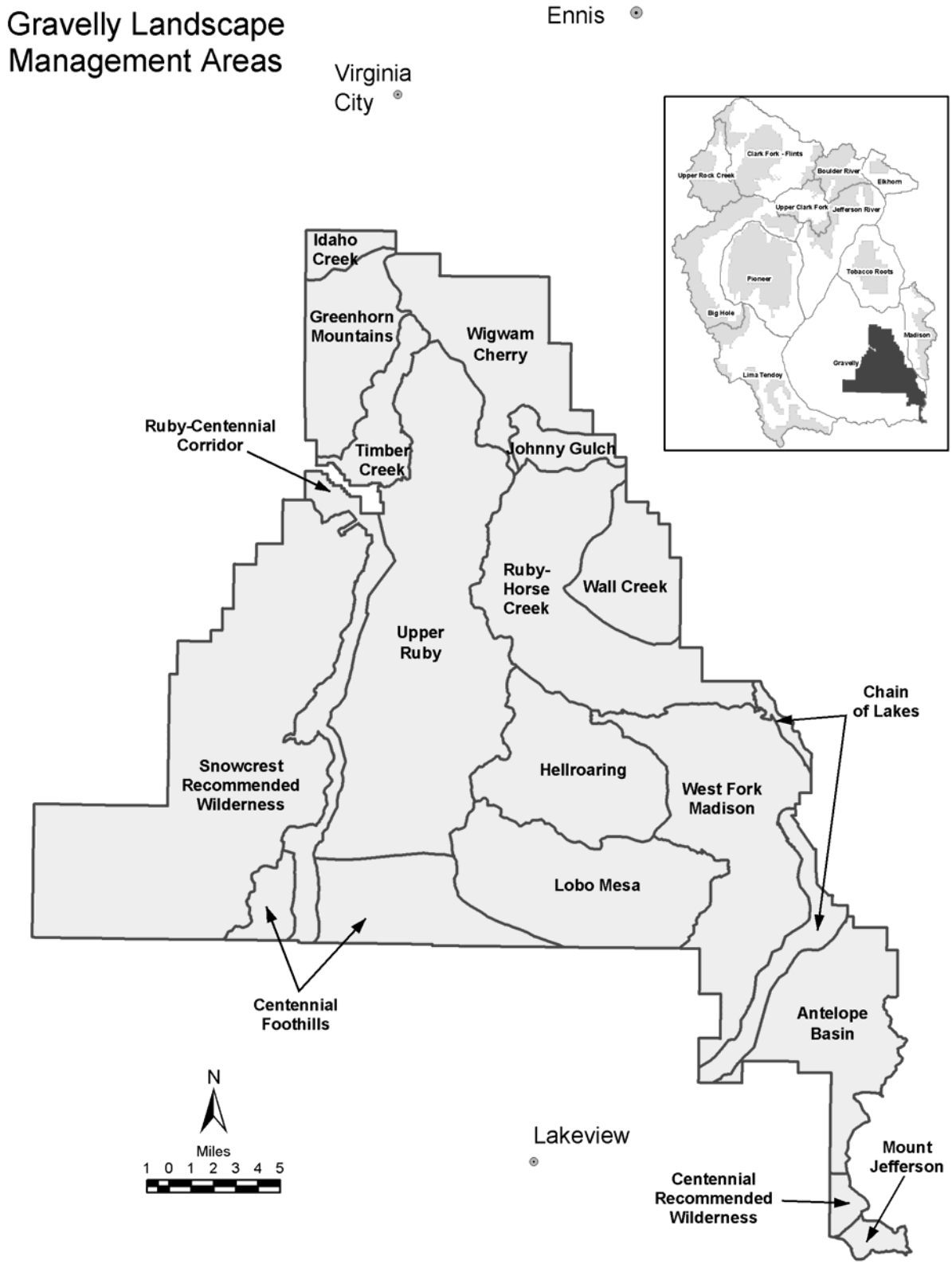


Boulder



ELKHORN LANDSCAPE

Management areas in this landscape are jointly administered by the Helena National Forest. Management direction will be updated during revision of the Helena National Forest Plan.


Gravelly Landscape Management Areas
Ennis
Virginia City
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Pioneer
Tobacco Roots
Big Hole
Madison
Gravelly
Lima Tendoy
Idaho Creek
Greenhorn Mountains
Wigwam Cherry
Ruby-Centennial Corridor
Timber Creek
Johnny Gulch
Ruby-Horse Creek
Wall Creek
Upper Ruby
Chain of Lakes
Snowcrest Recommended Wilderness
Hellroaring
West Fork Madison
Lobo Mesa
Centennial Foothills
Antelope Basin
N
Miles
1 0 1 2 3 4 5
Lakeview
Mount Jefferson
Centennial Recommended Wilderness

GRAVELLY LANDSCAPE

The Gravelly Landscape includes the Gravelly, Snowcrest, and Greenhorn Mountains, the Ruby River, and a small portion of the Centennial Mountains. The Snowcrest Mountains are steep and dissected. Though steep canyons dissect the Gravelly range, the top of these mountains includes gently rolling terrain covered with mixed alpine grasslands and conifer patches. Gentle uplands make it one of the more accessible mountain ranges. The Gravelly Range has unique geology with both recent and ancient evidence of volcanic and seismic activity.

This landscape has a high percentage of non-forested vegetation types like sagebrush, wet meadows, aspen, riparian zones and alpine grasslands. Productive soils support some of the more extensive aspen stands on the Forest. Bands of sheep and sheepherder wagons compliment the picturesque setting of this landscape. Grasslands here support nearly 50% of the livestock grazing on the Forest. Grazing by sheep, cattle and wildlife continues to influence the vegetation.

Vegetation includes lodgepole pine, dry site Douglas-fir, spruce, and subalpine fir and whitebark pine. Mountain pine beetle epidemics in the 1960's and 70's focused the Forest's timber harvest program in the West Fork drainage of the Gravelly Range for three decades. Large areas of threatened lodgepole pine were harvested, and young trees are now growing in those areas

Most streams in this landscape flow into the Madison and Ruby Rivers. The Madison, a world-renowned Class One Trout Stream, attracts large numbers of fly fishermen. The Ruby is noted for trout and grayling fisheries. Water management is critical to fish habitat and sporting opportunities in both rivers.

The Gravelly Landscape lies within the Greater Yellowstone Area (GYA) and contributes important secure habitat for grizzly bears, wolves, wolverines, bighorn sheep and elk. It is considered occupied grizzly bear habitat. The Gravelly Range also plays an important role in the GYA providing semi-primitive backcountry experiences for a range of users. The south end of the Gravellys, closest to Yellowstone Park, provides an extension to the snowmobile opportunities found in the West Yellowstone and Island Park areas. The south end has more predictable snow and the terrain is more inviting for off-trail experiences.

Summer recreation activities include firewood gathering, horseback and ATV riding, fishing, boating, dispersed camping, and hiking. Driving for pleasure over the top of the Gravelly Range or up the Ruby River into the Centennial Valley is a popular summer activity. The wildflower display on top of the range is an attraction during July and August.

Fall hunting contributes the greatest concentration of recreational visitors. This is one of the most heavily hunted areas in the State. The Ruby River Corridor, in particular becomes a city of hunting camps for the five week season.

Antelope Basin Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 39% Summer Motorized Travel Not Allowed
- 25% Winter Motorized Travel Not Allowed
- 'Winter Motorized Travel Not Allowed' Exception

Recreation Allocations

- 2% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 39% Summer Non-motorized
- 41% Backcountry Recreation
- 18% Road-based
- 0% Wilderness Study Area

Winter

- 25% Winter Non-motorized
- 73% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 31% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0

1:63,360

Cliff Lake RNA

CENTENNIAL MTNS WILDERNESS STUDY AREA

CONST

Antelope Basin Management Area

This area is managed for uncrowded dispersed recreation, livestock grazing, and wildlife habitat.

The recreation setting is mix of roaded and semi-primitive with natural appearing scenery. There is a western ranching atmosphere from grazing cattle, water tanks, fences, and rider's cabins enhanced by views of the pastoral setting in the Centennial Valley and the magnificent backdrop of the Centennial Mountains. The area provides recreational activities like hunting, driving, and camping in summer and fall, primarily along low standard roads and motorized trails and backcountry snowmobiling in winter.

The Basin lies along the Continental Divide and Idaho State Line, very close to winter recreation destinations at Henry's Lake, Island Park and West Yellowstone. Snowmobile opportunities in the Basin are more primitive and dispersed than at these destinations. Winter motorized closures offer quiet recreational opportunities accessible from Raynolds Pass. Winter closures near Hidden Lake contribute to secure areas in the Chain of Lakes.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer and fall

Snowmobilers and skiers on routes from Highway 87

Livestock and handling facilities

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Limit snowmobiles to the Road #056 corridor through the non-motorized area to provide access to open areas beyond

Centennial Foothills Management Area

Forest Boundary

Management Area Boundary

Travel Restrictions

40% Summer Motorized Travel Not Allowed

0% Winter Motorized Travel Not Allowed

Recreation Allocations

0% Inholding

0% Wilderness

0% Recommended Wilderness

Summer

40% Summer Non-motorized

46% Backcountry Recreation

14% Road-based

0% Wilderness Study Area

Winter

20% Winter Non-motorized

80% Winter Motorized Recreation

0% Wilderness Study Area Winter Non-motorized

0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds

0% Restoration Key Waterhseds

Research Natural Areas (RNA's)

National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

Eligible Wild Segments

Eligible Scenic Segments

Eligible Recreation Segments

Communication Sites

Existing

Proposed

Utility Rights of Way

Forest Declared Corridor

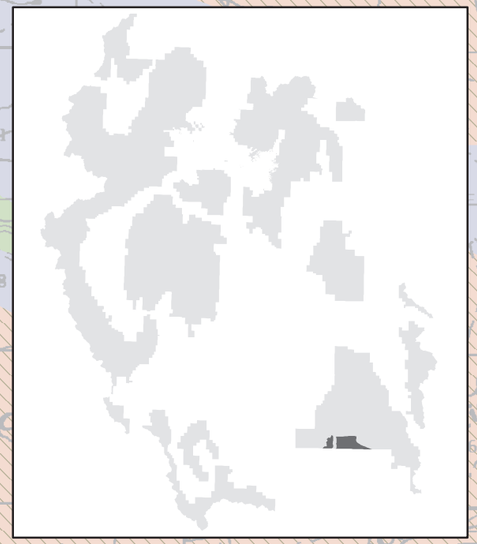
Existing Occupied Right-of-Way

Miles

0.5 0.25 0 0.5

N

1:63,360



Centennial Foothills Management Area

This area is managed for semi-primitive recreation and livestock grazing.

Recreation takes place in a semi-primitive motorized and non-motorized setting with natural appearing scenery. Although crossed by low standard roads, the area is natural appearing and gives visitors a feeling of isolation in a vast expanse. Fall is an exception, when hunters concentrate around dispersed camping sites. The low standard roads leading off the Ruby River Road offer backcountry driving with views of the striking mountain peaks of the Snowcrest Mountains, the Centennial Range above Red Rock Lakes, and the Centennial Valley. In fall, hunters concentrate in dispersed camping sites near roads. Adjacent Bureau of Land Management and State lands provide access options between the Forest and Centennial Valley.

A winter closure west of the road contributes to secure wildlife habitat in the Snowcrest Range.

Visitors may encounter

Vegetation changes from fire

Motor vehicles on roads and trails in summer and winter

Hunting camps

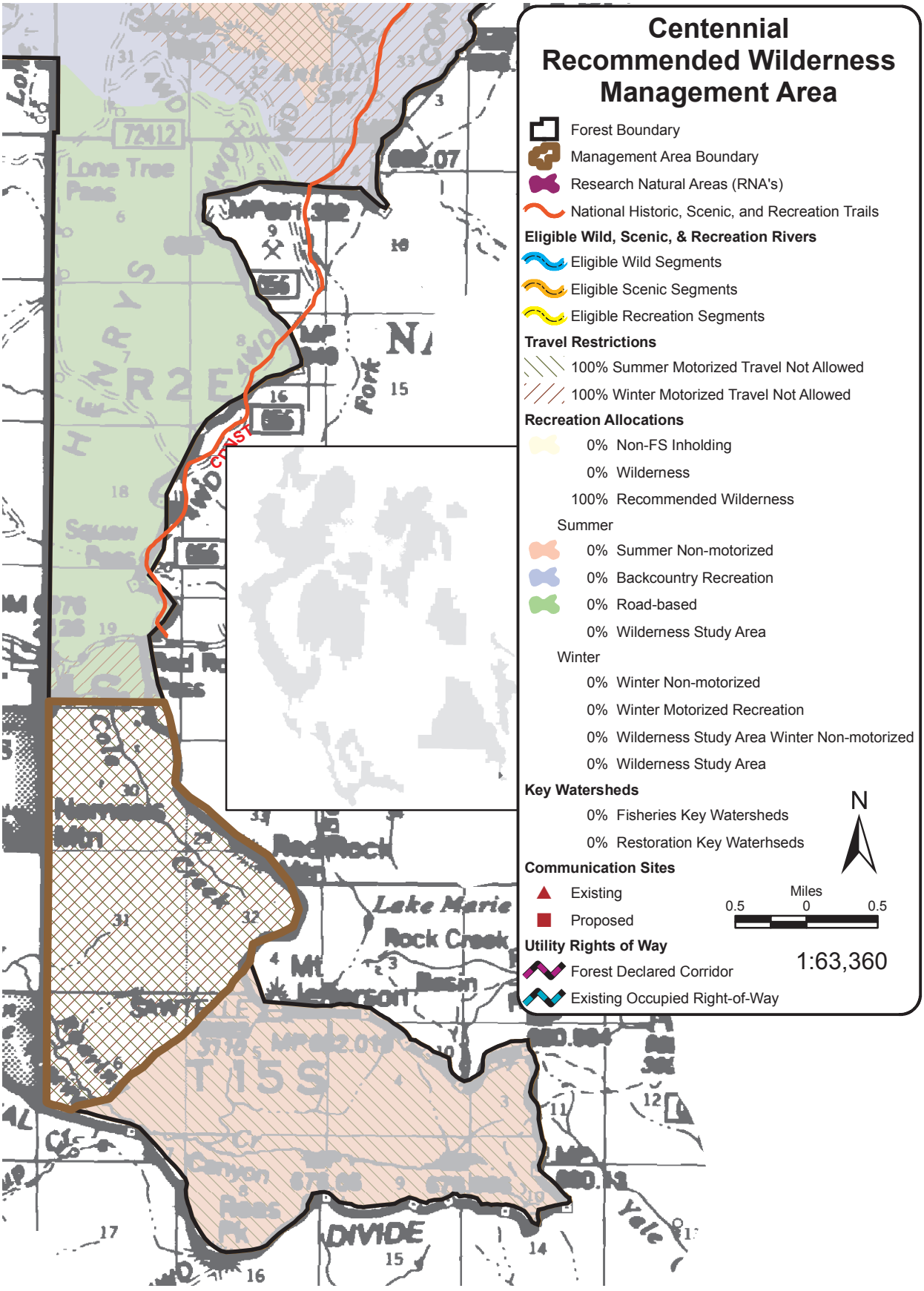
Livestock

Objectives in addition to Forestwide Objectives

Retain, but do not increase, opportunities for driving full size vehicles on primitive roads while mitigating impacts to other resources

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High


Centennial
Recommended Wilderness
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
100% Summer Motorized Travel Not Allowed
100% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Non-FS Inholding
0% Wilderness
100% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
0% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
0% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
0.5
0
0.5
1:63,360
CONTINENTAL DIVIDE
Lake Marie
Rock Creek
T15S
R2E

Centennial Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and values to enhance potential for future designation as wilderness and provide non-motorized recreation with high levels of challenge and solitude.

The recreation setting is semi-primitive with natural appearing scenery. Recreation activities are non-motorized with high levels of challenge and solitude which compliment opportunities in the adjacent BLM Centennial Mountain Wilderness Study Area.

Red Rock Pass and the Hellroaring Drainage provide a potential wildlife linkage between the Gravelly and Centennial Mountains. The area links the Greater Yellowstone Area to the Centennial Mountains contributing habitat for grizzlies, peregrine falcons, and denning areas for wolverine to the NWPS.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes from fire and other natural events

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

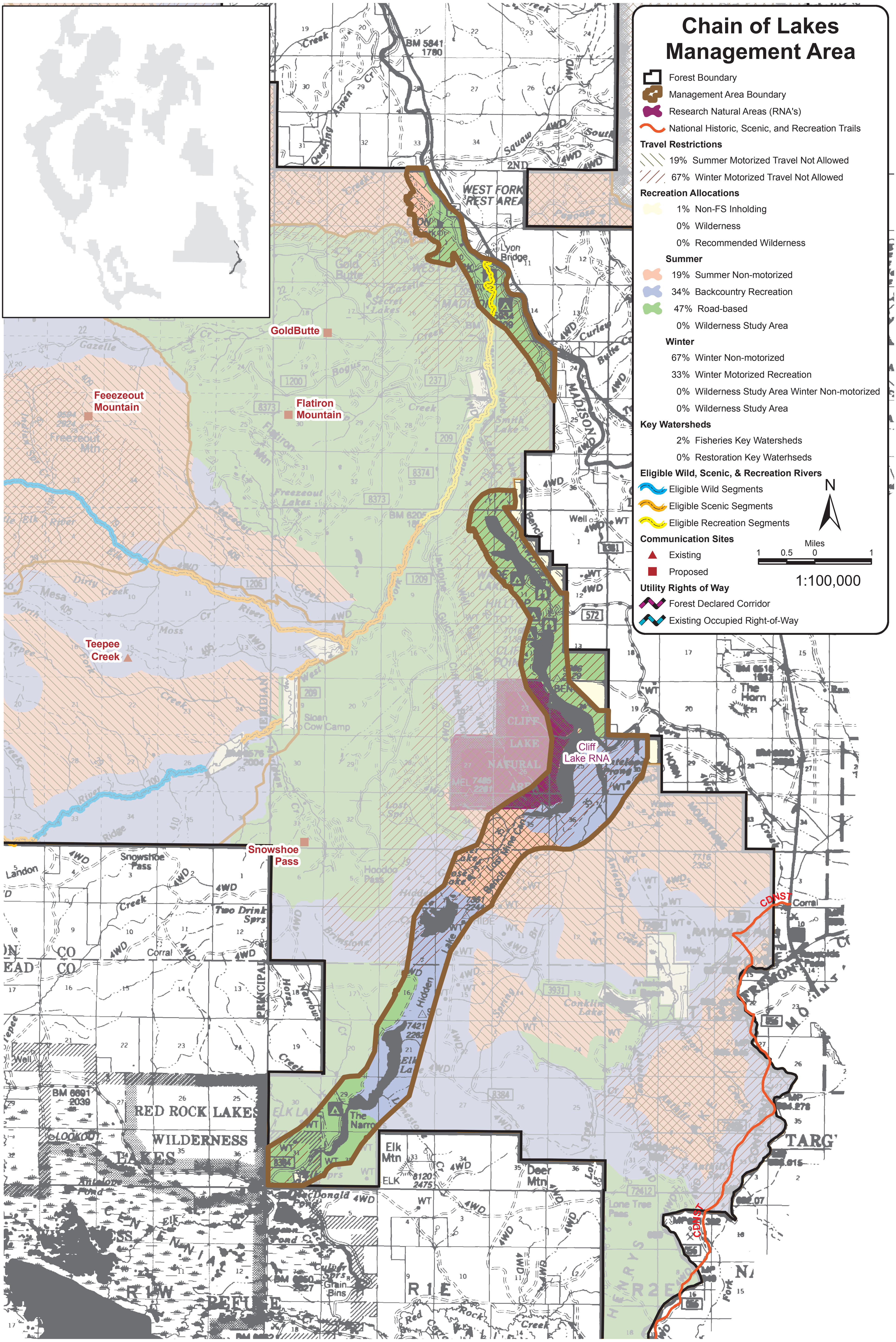
Minimum Scenic Integrity Objective – Very High

Management changes if released from wilderness designation

Semi-primitive non-motorized allocations apply in summer and winter.

Minimum Scenic Integrity Objective – High

Mountain bike travel is allowed.



Chain of Lakes Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Travel Restrictions
19% Summer Motorized Travel Not Allowed
67% Winter Motorized Travel Not Allowed
Recreation Allocations
1% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
19% Summer Non-motorized
34% Backcountry Recreation
47% Road-based
0% Wilderness Study Area
Winter
67% Winter Non-motorized
33% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
2% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000
GoldButte
Feeezeout Mountain
Flatiron Mountain
Teepee Creek
Snowshoe Pass
Cliff Lake RNA
CDNST
WEST FORK REST AREA
Lyon Bridge
RED ROCK LAKES WILDERNESS
Elk Mtn
Deer Mtn
The Narrows
Sloan Cow Camp
Corral

Chain of Lakes Management Area

This area is managed for developed and dispersed recreation while protecting fish and wildlife habitat. The Cliff and Wade lakes area that is accessible by motor vehicles and the units along the Madison River are developed recreation sites

The recreation settings are mixed roaded and semi-primitive with natural appearing scenery. The Madison River Recreation Area includes a variety of heavily used camping and day use facilities on the river. Developed sites at Cliff, Wade, and Elk lakes include boat launches, campgrounds, picnic areas, resorts, trailheads, and an interpretive trail. Hiking and fishing, ski touring, and ice fishing are popular. Snowmobilers access the south end of the Gravelly Range from the Lyons Bridge area. Wildlife security and quiet recreation opportunities are provided by a winter motorized closure.

The Chain of Lakes provides habitat for grizzly bear, bald eagles, trumpeter swans, osprey, peregrine falcon, moose, elk, and otters. Elk Lake supports a rare population of native lake trout. Narrows Creek is important to a population of grayling and boreal chorus frogs. The Madison River is a world renowned trout stream.

Visitors may encounter

Vegetation changes from timber harvest or fire

Occasional restrictions on recreation activities to protect wildlife

Many other visitors at developed sites and on trails

Snowmobiles and skiers on winter routes from Highway 287

Livestock and handling facilities around Elk Lake and the West Fork Cabin

Objectives in addition to Forestwide Objectives

Pursue conservation easements to protect the viewshed at Wade and Cliff Lakes.

Retain semi-primitive character in Lost Mine Canyon between the north end of Hidden Lake and Cliff Lake

Manage and control dispersed camping

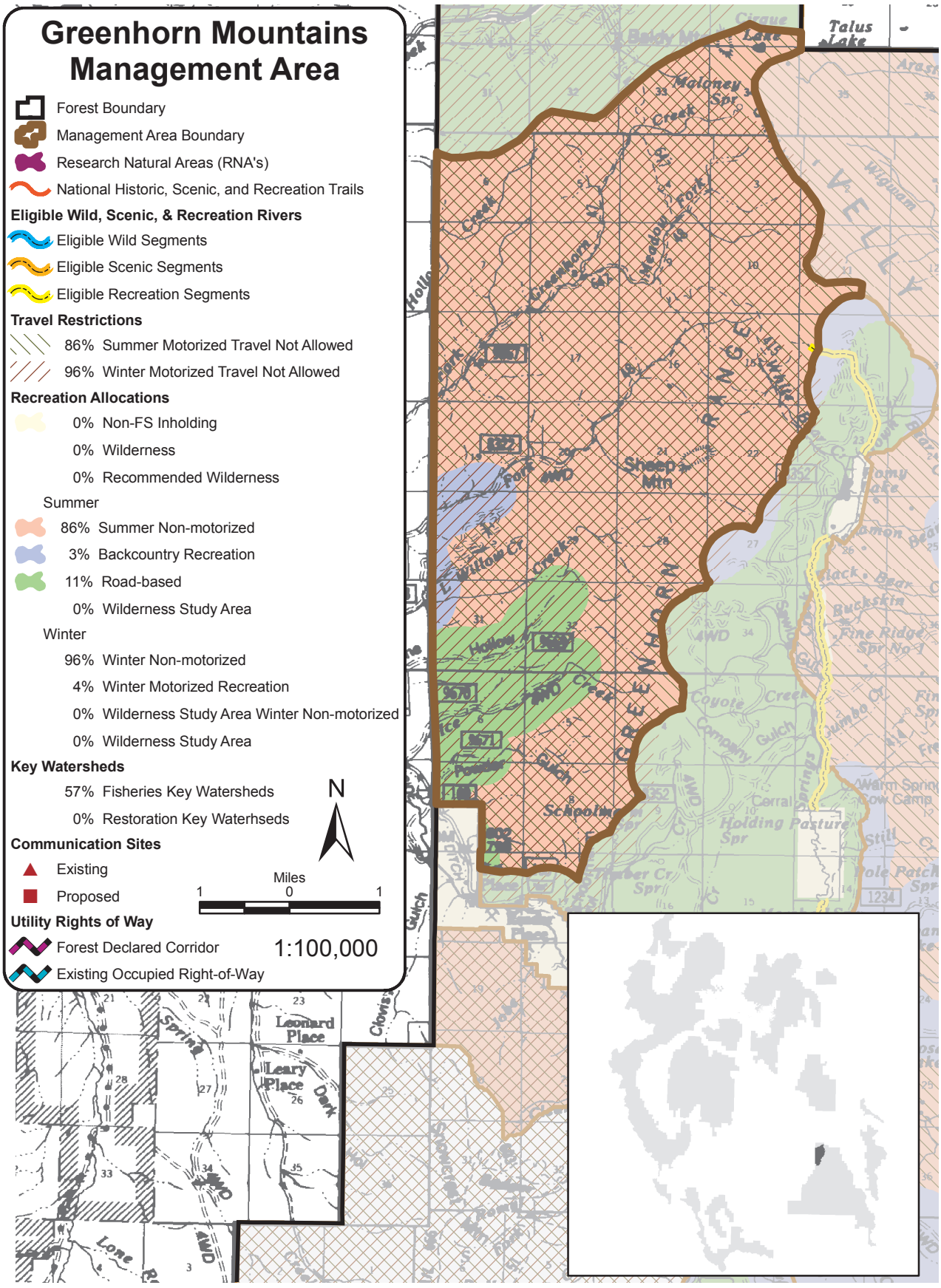
Maintain a groomed ski trail system in Cliff and Wade Lake vicinity. Restrict snowmobiling to designated ice fishing access routes

Enhance non-motorized winter recreation opportunities in the Madison River area. Provide a ski trail system easily accessed from Highway 287

Increase the spring water flow in Narrows Creek to improve grayling habitat

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate


Greenhorn Mountains Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
86% Summer Motorized Travel Not Allowed
96% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
86% Summer Non-motorized
3% Backcountry Recreation
11% Road-based
0% Wilderness Study Area
Winter
96% Winter Non-motorized
4% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
57% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0 1
1:100,000
Talus Lake
Maloney Spr
Sheep Mtn
Holding Pasture Spr
Leonard Place
Leary Place
Clows Gulch
Scapolin
Coyote Gulch
Warm Spring Camp
Buckskin
Fine Ridge Spr
Meadow Fork
Greenhorn Cr
Willow Cr
Hollow Cr
Powder Dutch
Spring Creek
Lone
4WD
Trail
Road

Greenhorn Mountains Management Area

This area is managed to protect its undeveloped (roadless) character, provide non-motorized recreation opportunities and provide secure wildlife habitat in both summer and winter.

The recreation setting is semi-primitive non-motorized with natural appearing scenery. Specific motorized roads provide access to the area. Visitors use the area and adjacent Bureau of Land Management lands for dispersed recreation in summer and hunting in the fall. Motorized use in summer and fall is limited to key access points.

Winter motorized closures protect winter range for elk, moose, deer, and bighorn sheep.

North Fork and South Fork Greenhorn watersheds are managed to conserve native fish populations.

Visitors may encounter

Quiet natural landscapes

Bighorn sheep

Vegetation changes from fire and other natural events

Visitors on foot, or horse and mountain bike riders

Objectives in addition to Forestwide Objectives

Maintain or enhance roadless characteristics and naturalness

Acquire motorized access to Powder Gulch and Ice Creek

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

Hellroaring Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 73% Summer Motorized Travel Not Allowed
- 40% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 73% Summer Non-motorized
- 27% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 40% Winter Non-motorized
- 60% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 1% Fisheries Key Watersheds
- 3% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0

1:63,360

Lazyman Repeater

Cave Mountain RNA

Feeezeout Mountain

Hellroaring Management Area

This area is managed to protect its undeveloped character and secure wildlife habitat while providing semi-primitive recreation opportunities.

The recreation setting is semi-primitive with natural appearing scenery. Scenic vistas from the top of the Gravelly Range span three mountain ranges. The opportunity for these vistas and wildlife viewing attract visitors to the Gravelly Range Road and Standard Creek Roads. Dispersed camping and recreational driving are common along these roads, particularly during hunting season. Within the area, a range of mostly non-motorized backcountry recreation experiences are available in summer. Around the periphery, motorized roads or trails provide access. Winter motorized closures in the Blue Lake area provide secure winter wildlife habitat and a remote destination for non-motorized recreation.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes only from fire and other natural events

Sightseers driving on main roads in summer and fall

Visitors on foot, horseback, or mountain bikes

Snowmobilers and skiers

Livestock

Objectives in addition to Forestwide Objectives

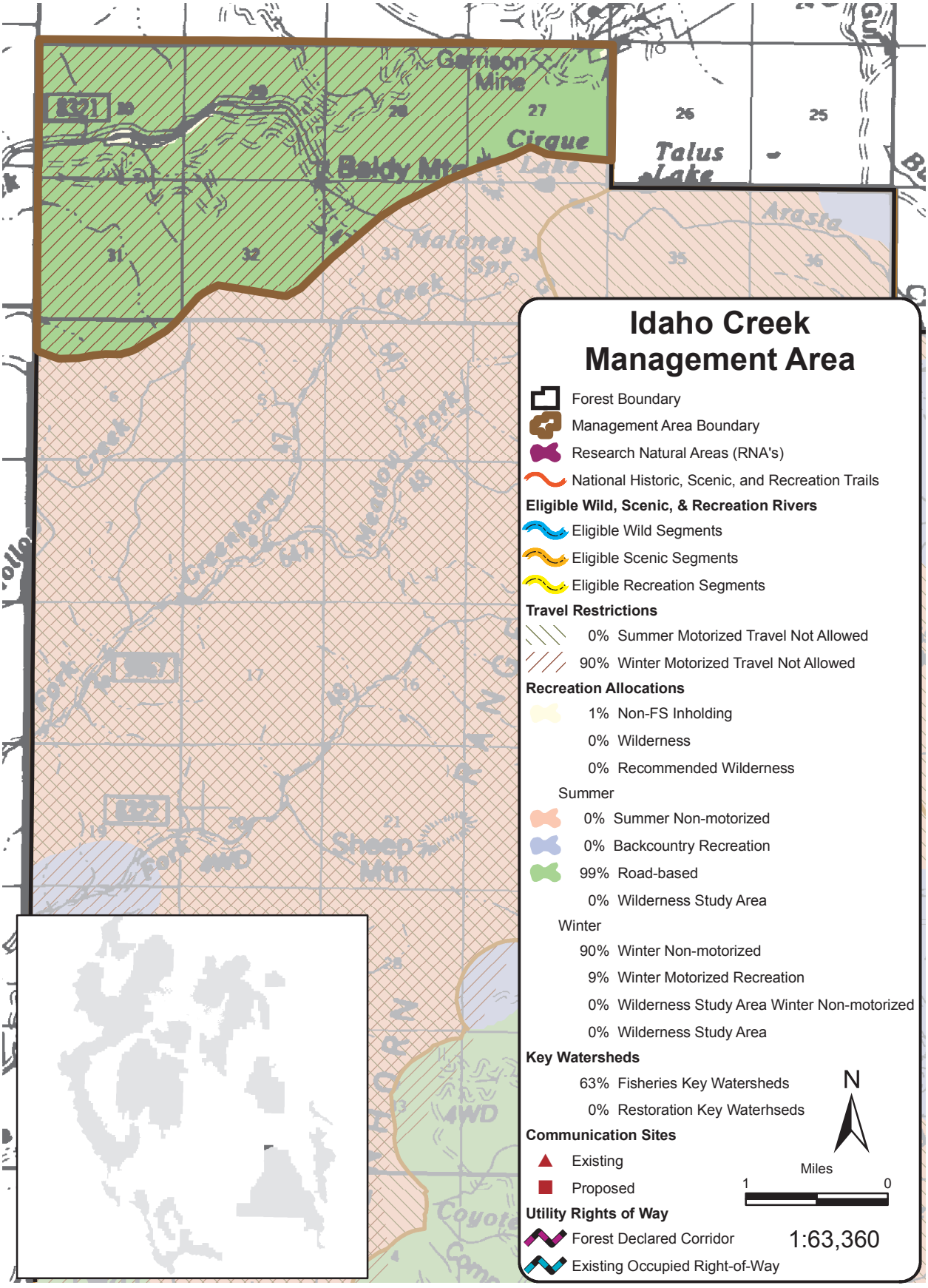
Maintain or enhance roadless characteristics and naturalness

Develop a historic preservation plan for Traditional Cultural Properties

Standards in addition to Forestwide Standards

No increase in motorized road or trail density

Minimum Scenic Integrity Objective - High


Garrison Mine
Cirque
Talus Lake
Baldy Mtn
Waloney Spr
Creek
Araste
Sheep Mtn
4WD
Coyote
Idaho Creek Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
90% Winter Motorized Travel Not Allowed
Recreation Allocations
1% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
99% Road-based
0% Wilderness Study Area
Winter
90% Winter Non-motorized
9% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
63% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1
0
1:63,360

Idaho Creek Management Area

This area is managed for road based recreation and other forest uses.

The recreation setting is roaded with a mix of altered and natural appearing scenery. Road based motorized opportunities and dispersed non-motorized opportunities are available. The road system was developed to access timber harvest units and mining activity. Recreation primarily takes place during hunting season.

Winter motorized closures protect big game winter range.

Idaho Creek watershed is managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer and fall

Historic mining remnants and current mining activity or reclamation

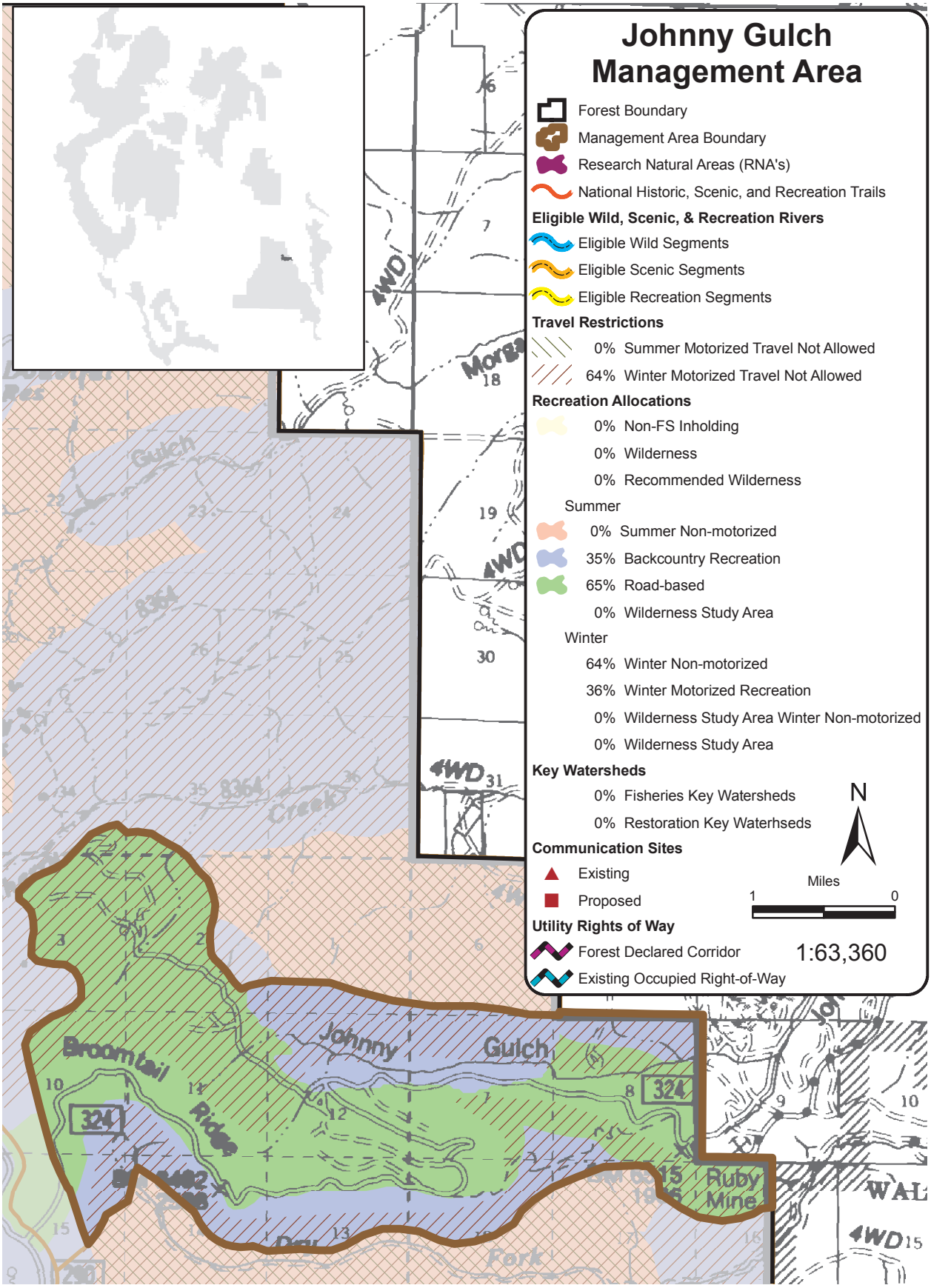
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


Johnny Gulch
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
64% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
35% Backcountry Recreation
65% Road-based
0% Wilderness Study Area
Winter
64% Winter Non-motorized
36% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1
0
1:63,360
Johnny
Gulch
Broomtail
Ridge
Ruby
Mine
Fork
4WD
324

Johnny Gulch Management Area

This area is managed for dispersed recreation and other forest uses.

Recreation takes place in a roaded setting with a mix of altered and natural appearing scenery. Johnny Gulch has a history of timber production, firewood cutting and mineral extraction. The adjacent talc mine, on private land, has been providing products to a world market since the 1940s and is highly visible. Un-patented claims associated with the mine extend into this area. In summer mostly motorized recreation opportunities are available. Recreation use is heaviest during hunting season with camps along many of the roads. In winter, snowmobile access to the top of the Gravelly Range is provided up the Johnny Gulch road but the rest of the area is closed for wintering elk and non-motorized recreation.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails year round

Dispersed camping along roads

Historic mining remnants and current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Retain dispersed camping opportunities with motorized access

Retain opportunities for primitive full-size four wheel driving on low standard roads

Standards in addition to Forestwide Standards

No net increase in permanent open motorized road density

Lobo Mesa Management Area

Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails

Travel Restrictions

51% Summer Motorized Travel Not Allowed
0% Winter Motorized Travel Not Allowed

Recreation Allocations

1% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness

Summer

51% Summer Non-motorized
47% Backcountry Recreation
1% Road-based
0% Wilderness Study Area

Winter

0% Winter Non-motorized
99% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments

Communication Sites

Existing
Proposed

Utility Rights of Way

Forest Declared Corridor
Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:100,000

Cave Mountain RNA
GoldButte
Feeezeout Mountain
Flatiron Mountain
Teepee Creek
Snowshoe Pass
SOUTH MADISON RECREATION AREA
WEST FORK REST AREA
MADISON CO
BEAVERHEAD CO

Lobo Mesa Management Area

This area is managed for semi-primitive recreation and livestock grazing.

Recreation takes place in a semi-primitive setting with predominantly natural appearing scenery. It is a popular area for recreation year around but particularly in fall hunting season. Miller Flat and Elk River trailheads provide access to a mix of motorized and non-motorized roads and trails through the classic “backcountry” of the Gravelly Range. Trails are traveled on ATV, motorcycle, snowmobile, horse, bicycle, foot and skis. Terrain and snowpack lend themselves to backcountry snowmobiling.

Visitors may encounter

Vegetation changes from fire and other natural events

Motor vehicle, horse, and mountain bike riders or hikers on trails

Snowmobilers

Hunting camps

Livestock

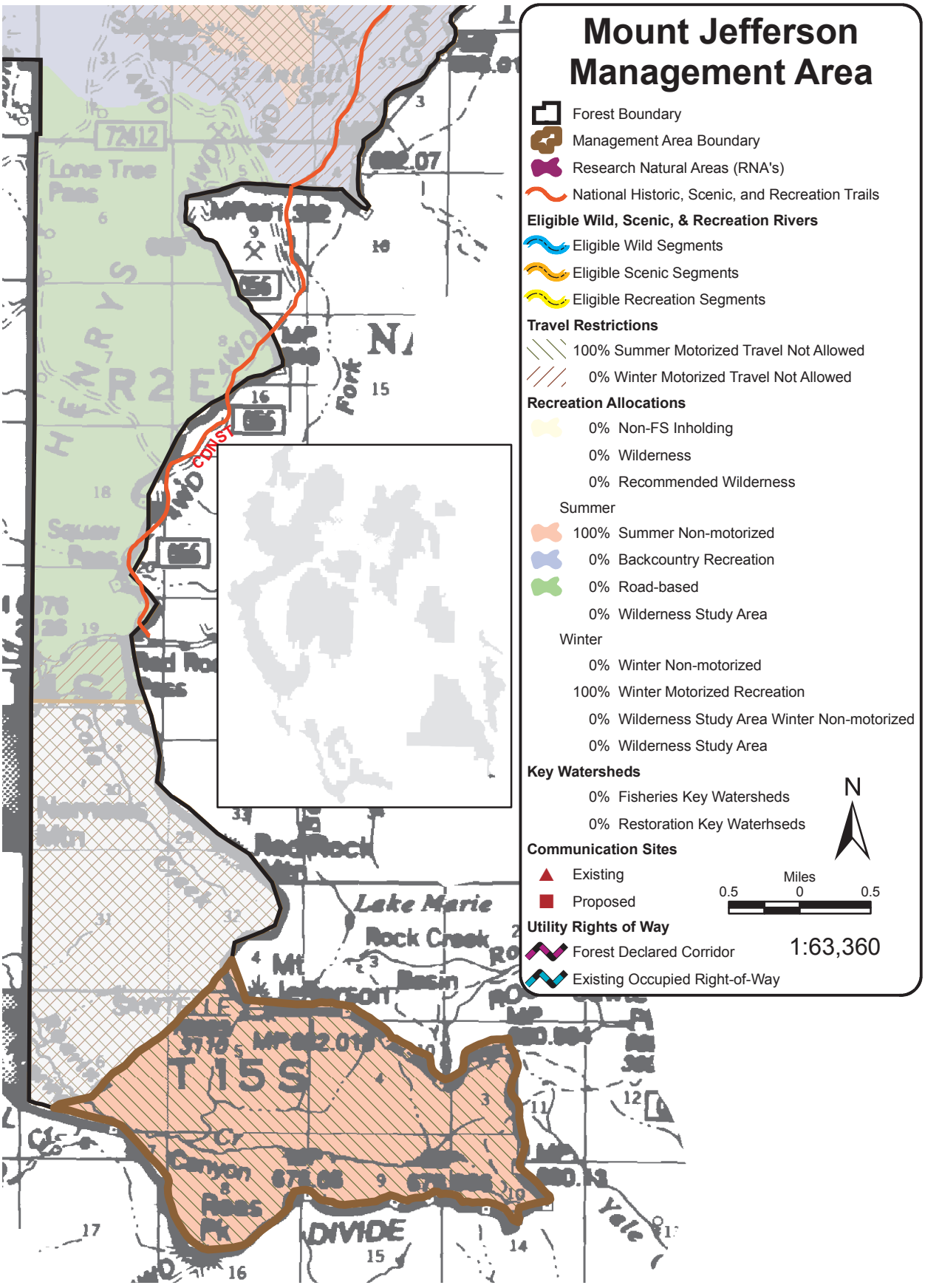
Objectives in addition to Forestwide Objectives

Maintain or enhance roadless characteristics and naturalness

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

No net increase in motorized trails


Mount Jefferson
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
100% Summer Motorized Travel Not Allowed
0% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
100% Summer Non-motorized
0% Backcountry Recreation
0% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
100% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
0.5
0
0.5
1:63,360
T 15 S
R2E
Lake Marie
Rock Creek
DIVIDE
Lone Tree Pass
Squaw Pass
Canyon
Rees Pk
Fork
Yale

Mount Jefferson Management Area

This area is managed to protect undeveloped (roadless) character, provide recreation opportunities in a remote alpine setting, and secure wildlife habitat.

The recreation setting is semi-primitive. Non-motorized summer activities include hiking, stock travel, and mountain biking. In winter, snowmobiling and cross-country skiing takes place in high elevation settings.

Vegetation is managed primarily through prescribed and natural fire. Undisturbed wildlife habitat is provided here along the continental divide linking the Greater Yellowstone Area and Centennial Mountains.

Visitors may encounter

Native vegetation which changes little except for fire and other natural events

Other visitors on foot, horseback or bicycles in summer and fall

Snowmobilers and skiers in winter

Objectives in addition to Forestwide

None

Standards in addition to Forestwide

Minimum Scenic Integrity Objective - High

Timber harvest is not allowed

Ruby-Centennial Corridor Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 20% Summer Motorized Travel Not Allowed
- 37% Winter Motorized Travel Not Allowed

Recreation Allocations

- 2% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 20% Summer Non-motorized
- 41% Backcountry Recreation
- 37% Road-based
- 0% Wilderness Study Area

Winter

- 37% Winter Non-motorized
- 61% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 14% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:100,000

Cottonwood Creek RNA

Divide

Ruby-Centennial Corridor Management Area

This area is managed for developed and dispersed recreation opportunities and scenic values, balanced with the fisheries and wildlife values of the Ruby River.

The recreation setting is roaded with a mix of altered and natural appearing scenery. Ranching activities and remnants of historic ranching contribute to the area's pastoral character. Home sites and rider's cabins are scattered along this route linking the Ruby and Centennial valleys. The Ruby Centennial Road serves for pleasure driving and as a destination for campers who disperse up and down the river corridor in summer and especially during fall hunting season

Winter non-motorized areas on the west side contribute to wildlife security in the Snowcrest Range.

The Ruby River is one of the higher natural sediment producing streams on the Forest as a result of upslope cretaceous shale formations. Even so, the River is very important for trout and reintroduced grayling fisheries as well as irrigation. A number of streams support self-sustaining boreal toad populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails year-round

Dispersed camping along roads

Livestock

Objectives in addition to Forestwide Objectives

Manage, harden, and designate new dispersed recreation sites along the Ruby Centennial Road

Manage side roads consistently with adjacent management areas

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Ruby-Horse Creek Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 86% Summer Motorized Travel Not Allowed
- 97% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 86% Summer Non-motorized
- 13% Backcountry Recreation
- 1% Road-based
- 0% Wilderness Study Area

Winter

- 97% Winter Non-motorized
- 3% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 37% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 1 0.5 0 1

1:100,000

Clover Meadows

Lazyman Repeater

Cave Mountain RNA

GoldButte

Feeezeout Mountain

Flatiron Mountain

Ruby-Horse Creek Management Area

This area is managed to protect roadless character, provide challenging recreation opportunities and secure wildlife habitat.

The recreation setting is semi-primitive, mostly non-motorized, with natural appearing scenery. The adjacent Gravelly Range Road corridor provides access to the area and a view into this particularly scenic area for pleasure drivers. Common activities in the area include horse, foot or bicycle travel.

Large blocks of connected timber, unaffected by motorized use, provide secure wildlife habitat, particularly important to elk as the move to the Wall Creek Game Range to winter. High elevation winter habitat offers high quality wolverine denning sites in proximity to ungulate winter range. Livestock grazing is limited in parts of Ruby-Horse Creek to protect wildlife habitat.

Horse Creek is managed to conserve native fish populations.

Visitors may encounter

Quiet natural landscapes

Vegetation changes from fires and other natural events

Pleasure drivers on main roads around the area

Visitors on foot, horseback, or mountain bikes

Snowmobiles on roads in the management area

Skiers near Johnny Gulch or the West Fork

Livestock

Objectives in addition to Forestwide Objectives

Maintain or enhance roadless characteristics and naturalness

Develop an Historic Preservation Plan for Traditional Cultural Properties

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

Snowcrest Recommended Wilderness Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed
- 'Motorized Travel Not Allowed' Exceptions

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 100% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

N

Miles
1 0.5 0 1

1:100,000

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

Cottonwood Creek RNA

Divide Comm Site

Antone Pk Comm Site

Snowcrest Mountain Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and provide non-motorized recreation with a high level of challenge and solitude.

The recreation setting is semi-primitive and natural appearing. The high alpine Snowcrest Mountains provides scenic vistas, wildlife viewing and a back country experience unique to island mountain ranges. This is one of the more remote areas requiring a long drive on gravel roads. The trail system is extensive and used by horseback riders and hikers.

Road corridors through the recommended wilderness area lead to Antone and Notch cabins. These exceptions provide vehicle access at least part of the year to the cabins, designated campsites, and trailheads.

Livestock grazing is an important traditional use in lower elevations. Ecosystem components are regulated by natural processes. The Snowcrest Mountains provide large blocks of secure wildlife habitat, next to the Blacktail and Robb Ledford Game Ranges.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes from fire and other natural events

Livestock

Objectives in addition to Forestwide Objectives

Stabilize abandoned roads to prevent further erosion

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective – Very High

Route to Antone Cabin is open to motorized vehicles yearlong, dispersed camping is allowed where marked.

Route to the Notch Saddle is open to vehicles in the summer dispersed camping is allowed within 300 feet of the road.

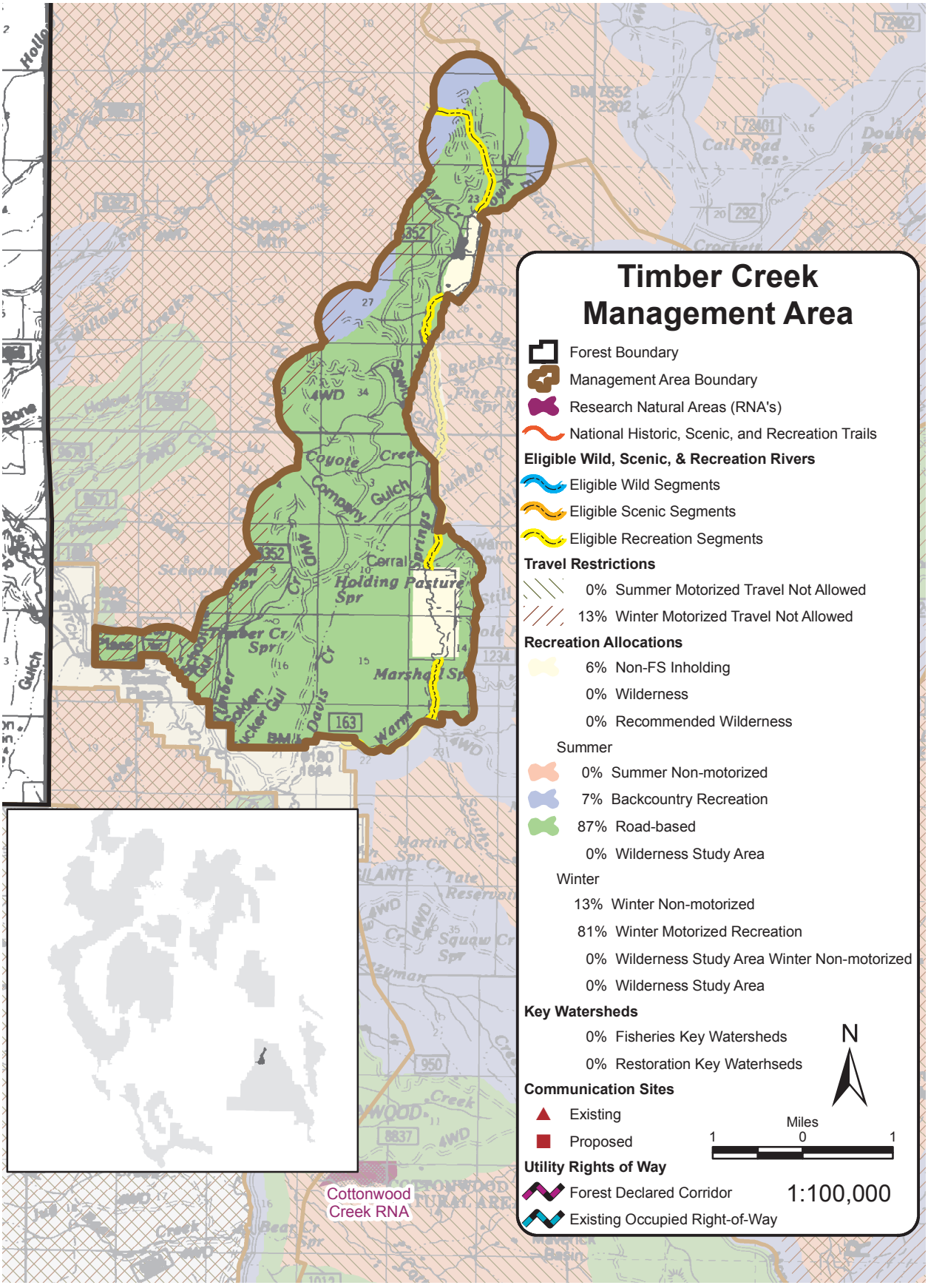
Traditional ranching uses will continue, such as sheep grazing and use of motorized vehicles for trailing and improvement maintenance

Management changes if released from wilderness designation

Semi-primitive non-motorized allocation with designated routes to trailheads and cabins

Minimum Scenic Integrity Objective – High

Mountain bikes are allowed


Timber Creek Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
13% Winter Motorized Travel Not Allowed
Recreation Allocations
6% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
7% Backcountry Recreation
87% Road-based
0% Wilderness Study Area
Winter
13% Winter Non-motorized
81% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0 1
1:100,000
Cottonwood Creek RNA
Coyote Creek
Company Gulch
Holding Pasture Spr
Marshall Sp
Timber Cr Spr
Squaw Cr Spr
Martin Cr
Call Road Res
Sheep Mtn
Scheelite Gulch
Davis Cr
Warm
4WD
352
163
950
8837

Timber Creek Management Area

This area is managed for a mix of forest uses, road based recreation, dispersed camping, and big game winter range.

The recreation setting is roaded with a mix of altered and natural appearing scenery. Recreation activities are generally tied to access for hunting, firewood gathering, and non-motorized trails into the Greenhorn Mountains.

Habitat security is maintained on big game winter range through a winter non-motorized allocation.

Visitors may encounter

Vegetation changes from timber harvest or fire

Timber harvest and system or temporary roads

Motor vehicles on roads and trails in summer and winter

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Upper Ruby Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 57% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 57% Summer Non-motorized
- 32% Backcountry Recreation
- 11% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 100% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 23% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:100,000

Clover Meadows

Lazyman Repeater

Cottonwood Creek RNA

Divide

Upper Ruby Management Area

This area is managed for a range of semi-primitive recreation based on primitive roads and trails and for livestock grazing.

The recreation setting is semi-primitive motorized and non-motorized with mostly natural appearing scenery. Primitive roads leading from the Ruby River and Gravelly Range roads offer backcountry driving experiences. A system of non-motorized trails also provides horseback riding and packing opportunities. Even though crossed by low standard roads, visitors can find solitude and a real backcountry experience – except in fall when hunters concentrate at dispersed camping sites. Winter recreation is generally confined to road corridors and some open areas near the top of the mountain range.

Soils are a management consideration on the west flank of the Gravelly Range. They are derived from cretaceous shale, susceptible to saturation, soil movement and high sediment yields.

Burnt Creek watershed is managed to conserve native fish populations. Several streams support populations of westslope cutthroat trout. An isolated population of tiger salamanders has been found here.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and some trails in summer and winter

Hikers and horseback riders on trails in summer and fall

Hunting camps

Livestock and livestock handling facilities

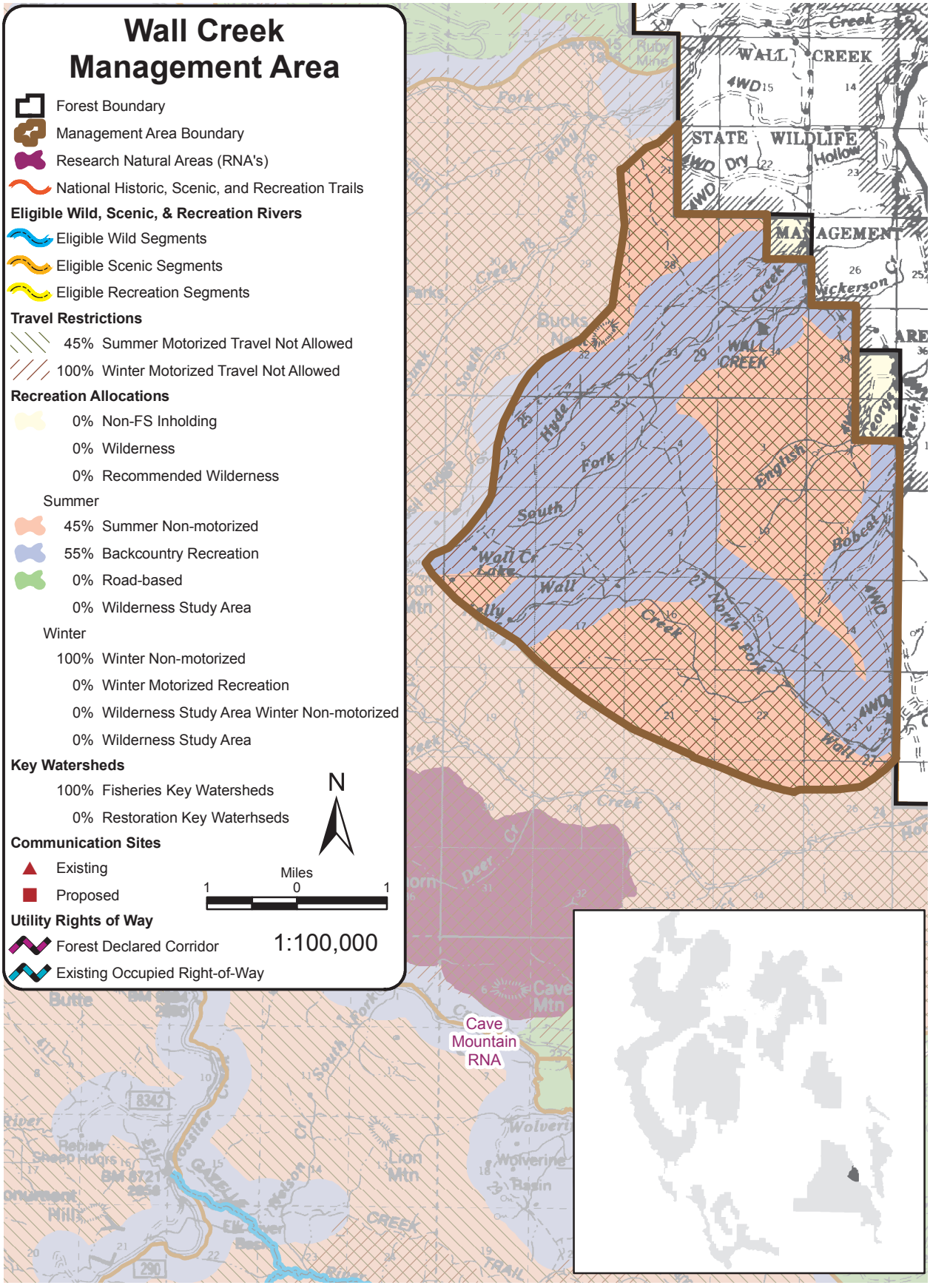
Objectives in Addition to Forestwide Objectives

Retain opportunities for primitive full-size vehicle driving while mitigating impacts to other resources

Develop an Historic Preservation Plan for Traditional Cultural Properties

Standards in addition to Forestwide Standards

None


Wall Creek
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
45% Summer Motorized Travel Not Allowed
100% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
45% Summer Non-motorized
55% Backcountry Recreation
0% Road-based
0% Wilderness Study Area
Winter
100% Winter Non-motorized
0% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
100% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0 1
1:100,000
Cave Mountain RNA
WALL CREEK
STATE WILDLIFE
MANAGEMENT
Wall Creek
Cave Mtn
Lion Mtn
Wolverine Basin

Wall Creek Management Area

This area is managed for secure wildlife habitat with an emphasis on wintering elk, and for semi-primitive recreation.

The recreation setting is semi-primitive motorized and non-motorized with natural appearing scenery. Most of the area is undeveloped except around the Wall Creek Cabin and Game Range headquarters. In summer, visitors can find solitude in the backcountry of Wall Creek. Recreation concentrates during hunting season when opportunities shift to non-motorized. Dispersed campsites spring up along roads and backcountry camps along trails. The area is closed to winter use in conjunction with Montana Fish Wildlife and Parks winter game range closures.

Late fall wildlife security, thermal cover, and winter forage are important for wintering elk. Livestock grazing is closely coordinated with Montana Fish, Wildlife, and Parks at lower elevations and on the Game Range to improve vigor of forage for elk winter range.

Wall Creek is managed to conserve native fish populations.

Visitors may encounter

Quiet natural landscapes

Native vegetation which changes little except for fires or insect outbreaks

Scattered hunting camps along roads and trails

Livestock

Objectives in addition to Forestwide Objectives

Standards in addition to Forestwide Standards

No net increase in motorized trail density

Dates for motorized prohibitions will be coordinated with Montana Fish Wildlife and Parks to improve winter elk security. These dates will supercede forestwide standards for non-motorized allocations.

West Fork Madison Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 8% Summer Motorized Travel Not Allowed
- 28% Winter Motorized Travel Not Allowed

Recreation Allocations

- 1% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 8% Summer Non-motorized
- 9% Backcountry Recreation
- 82% Road-based
- 0% Wilderness Study Area

Winter

- 28% Winter Non-motorized
- 71% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 14% Fisheries Key Watersheds
- 19% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:100,000

GoldButte
Feeezeout Mountain
Flatiron Mountain
Teepee Creek
Snowshoe Pass
Cliff Lake RNA

West Fork Madison Management Area

This area is managed for dispersed road based recreation and a mix of forest uses.

The recreation setting is roaded with a mix of altered and natural appearing scenery. Developed road systems and old harvest units reflect a history of use and management. Lodgepole pines have filled in the large-scale clearcuts from the 1960's and blend into the surrounding forest. Driving for pleasure, dispersed camping, firewood gathering and hunting are primary activities. The River corridor attracts fishermen and campers from early summer through hunting season. Snow levels on the south end of the Gravelly Range are conducive to winter recreation with access from Highway 287 to groomed snowmobile trails and cross country skiing.

Winter motorized closures in the Standard Creek and Gold Butte area secure an area for wildlife movement from Papoose Creek and the Madison Range and provide and opportunity for quiet recreation accessible from Highway 287.

Freezeout Creek is managed to restore watershed conditions. Soap Creek is managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Timber harvest and system or temporary roads

Motor vehicles on roads and trails

Dispersed camping along roads

Snowmobilers and skiers on routes from Highway 287

Livestock

Objectives in addition to Forestwide Objectives

Retain a low level of development in dispersed camping sites along the West Fork Madison. Consolidate use, designate and harden sites to prevent resource damage

Develop cross country skiing and snowshoeing opportunities with easy access from US 287

Retain current levels of development for snowmobiling. Snowmobile grooming will remain intermittent to provide more challenging experiences

Manage summer road closures for firewood gathering and post and pole harvest opportunities

Standards in addition to Forestwide Standards

No net increase in permanent open motorized road density

Wigwam-Cherry Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 51% Summer Motorized Travel Not Allowed
- 44% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 51% Summer Non-motorized
- 48% Backcountry Recreation
- 1% Road-based
- 0% Wilderness Study Area

Winter

- 44% Winter Non-motorized
- 55% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 1 0.5 0

1:63,360

Wigwam-Cherry Management Area

This area is managed for semi-primitive recreation and livestock grazing.

The recreation setting is semi-primitive with predominantly natural appearing scenery. Livestock grazing, fences, and water tanks are evident. Opportunities are available for dispersed motorized and non-motorized recreation. Activities include pleasure driving (to enjoy unique vistas and wildflower displays) and hunting. Hunters camp in dispersed sites along roads. The BLM Axolotyl Wilderness Study Area and Haypress Subdivision lie adjacent to the Forest on the north. Recreation use is often associated with these areas and with Alder Gulch historic mining district Snowmobilers access the area from Alder Gulch during good snow years.

A winter non-motorized allocation provides secure elk winter range.

Visitors may encounter

Vegetation changes from timber harvest or fire

Dispersed camping along forest roads

Motor vehicles on roads and trails in summer and winter

Visitors on hiking trails

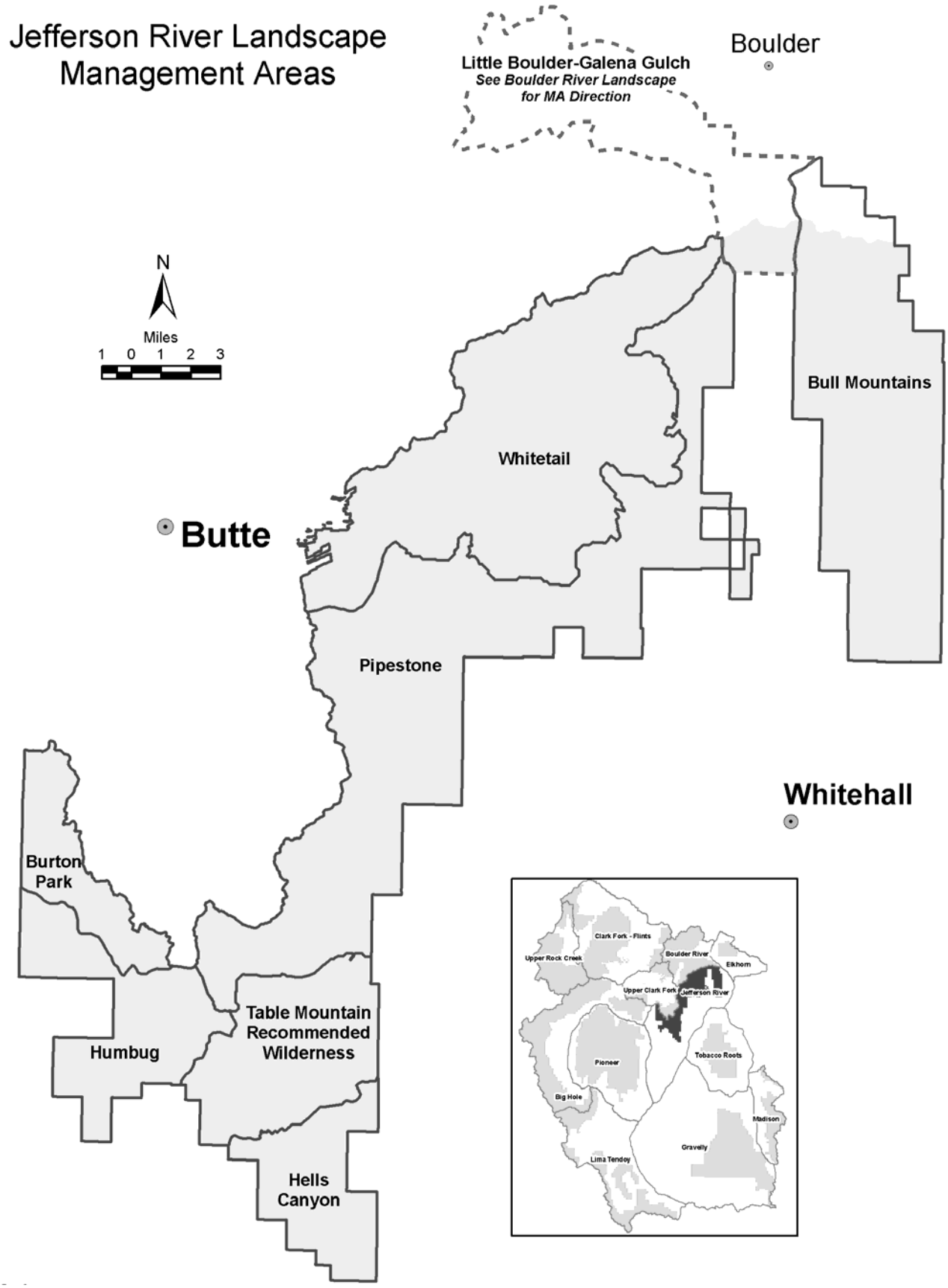
Livestock

Objectives in addition to Forestwide Objectives

Improve the quality of motorized trails without increasing density

Standards in addition to Forestwide Standards

None


Jefferson River Landscape
Management Areas
Little Boulder-Galena Gulch
See Boulder River Landscape
for MA Direction
Boulder
N
Miles
1 0 1 2 3
Bull Mountains
Whitetail
Butte
Pipestone
Whitehall
Burton
Park
Humbug
Table Mountain
Recommended
Wilderness
Hells
Canyon
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Pioneer
Tobacco Roots
Big Hole
Madison
Gravelly
Lima Tendoy

JEFFERSON RIVER LANDSCAPE

The landscape includes parts of three mountain ranges which drain from the Continental Divide into the head of the Jefferson River. These are the Highlands, the Whitetail Pipestone area, and the Bull Mountains. Much of the area is part of the Boulder Batholith, a unique geologic feature characterized by large granite boulders jutting above the ground, worn smooth by erosion. The best example of these features can be seen from Interstate 90 at Homestake Pass. This landscape is drier than others on the Forest, because of the granitic composition of the soils and its position in the rain shadow of the Continental Divide. Lodgepole pine dominates the upper elevations while at low elevations Douglas-fir is the most common, and is intermingled with open grasslands. Mountain mahogany, an uncommon species on the BDNF, provides important browse for big game. A herd of bighorn sheep live in the Highland Mountains. Elk, moose, and other wildlife inhabit the area.

Historic railroad structures, mills, adits, and cabins characterize mining and settlement history. Mining has had an impact on vegetation. Most timber was harvested at some point for lumber or fuel for home heat and smelters. There are numerous Native American historic sites.

Livestock grazing, post and pole harvest, and small timber sales are common resource uses. Interstate 90, which crosses the Continental Divide at Homestake Pass, is a major east-west transportation and utility corridor.

The landscape is fairly open with a mix of gentle and very steep terrain. Motorized trails near Butte are heavily used in both summer and winter. Scenic driving, picnicking, dispersed camping, and trail riding are very popular, along with some of the more unique activities associated with urban areas which create law enforcement challenges.

Bull Mountains Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 46% Summer Motorized Travel Not Allowed
- 55% Winter Motorized Travel Not Allowed

Recreation Allocations

- 36% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 46% Summer Non-motorized
- 0% Backcountry Recreation
- 18% Road-based
- 0% Wilderness Study Area

Winter

- 55% Winter Non-motorized
- 10% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000

Boulder River Landscape

Jefferson River Landscape

Dry Mountain RNA

Bull Mtn (Off NF)

Bull Mountains Management Area

This area is managed for livestock grazing and low density dispersed recreation. Other ecosystem components are regulated by natural processes and events.

Recreation takes place in a roaded and semi-primitive non-motorized setting with natural appearing scenery. The checkerboard mix of private and National Forest System lands constrains management and recreation opportunities. Only two roads provide public access. Recreation use is primarily during hunting season on limited motorized routes. Use in summer is infrequent. The few trails are non-motorized.

Roads and trails are closed to motorized activities in winter to protect wintering elk.

Visitors may encounter

Vegetation changes from prescribed or wild fire

Motor vehicles and hunters in fall

Livestock

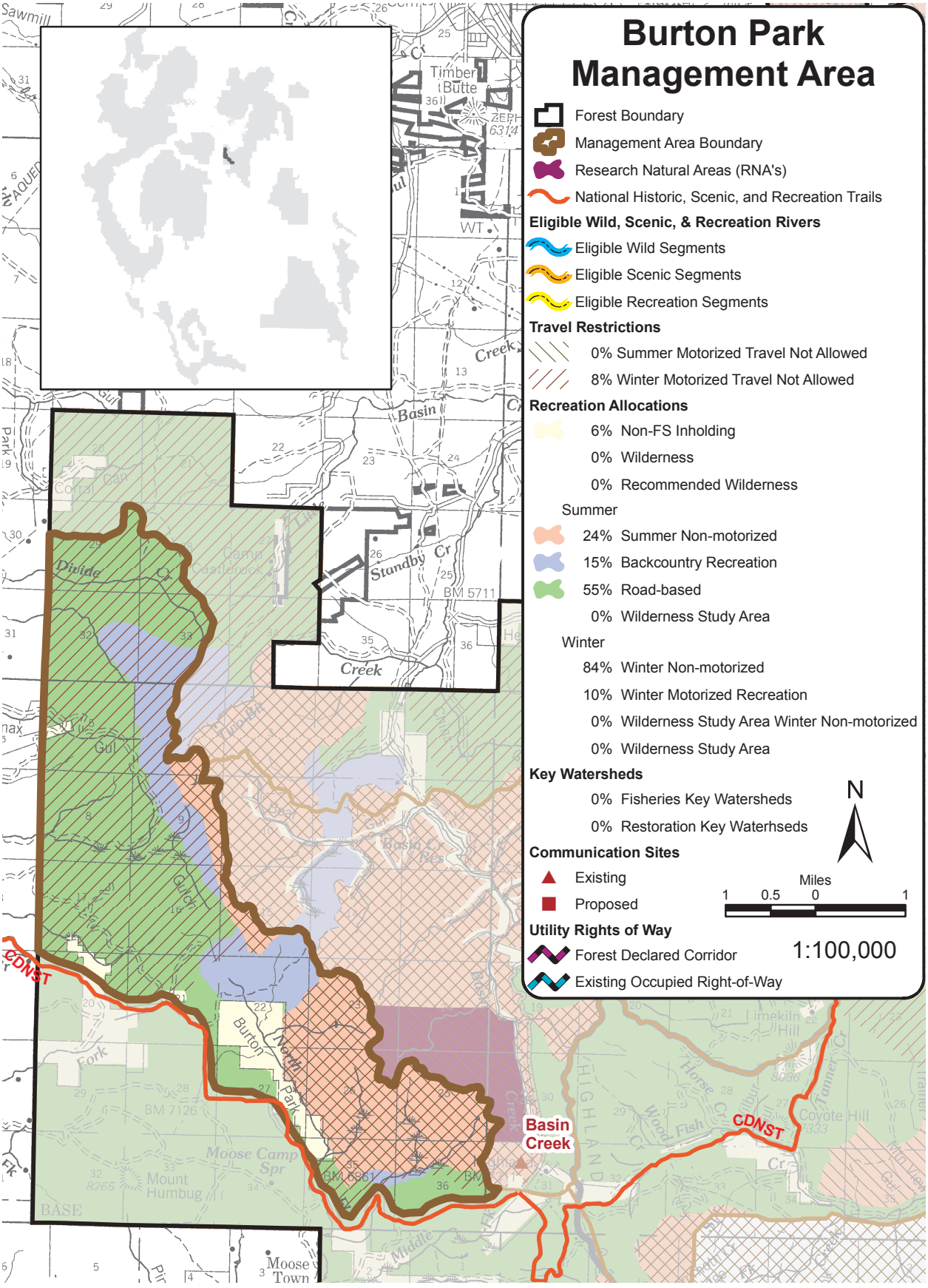
Objectives in addition to Forestwide Objectives

Coordinate management with owners of private lands inside the Forest boundary

Improve rangeland conditions by reducing widespread Douglas-fir colonization of grasslands

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate


Burton Park Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
8% Winter Motorized Travel Not Allowed
Recreation Allocations
6% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
24% Summer Non-motorized
15% Backcountry Recreation
55% Road-based
0% Wilderness Study Area
Winter
84% Winter Non-motorized
10% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000
CDNST
Basin Creek
Timber Butte
Standby Cr
Divide
Burton
North Fork
Moose Camp Spr
Mount Humbug
Moose Town
Limekiln Hill
Coyote Hill
Horse Cr
Wood Fish Cr
Tanner Cr
BM 5711
BM 7126
BM 6861

Burton Park Management Area

This area is managed for a variety of dispersed recreation opportunities easily accessible from Butte, and for secure winter wildlife habitat.

Recreation takes place in a range of roaded to semi-primitive non-motorized settings. In the middle lies Burton Park; a large privately owned open area. The area southeast of Burton Park provides a unique opportunity for quiet recreation experiences in all seasons within a short distance of Butte and amongst the granitic outcrops of the Boulder Batholith. North of Burton Park visitors find a summer roaded setting with motorized opportunities.

Winter closures provide secure habitat for wildlife and accessible winter recreation activities.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer and fall

Skiers

Livestock

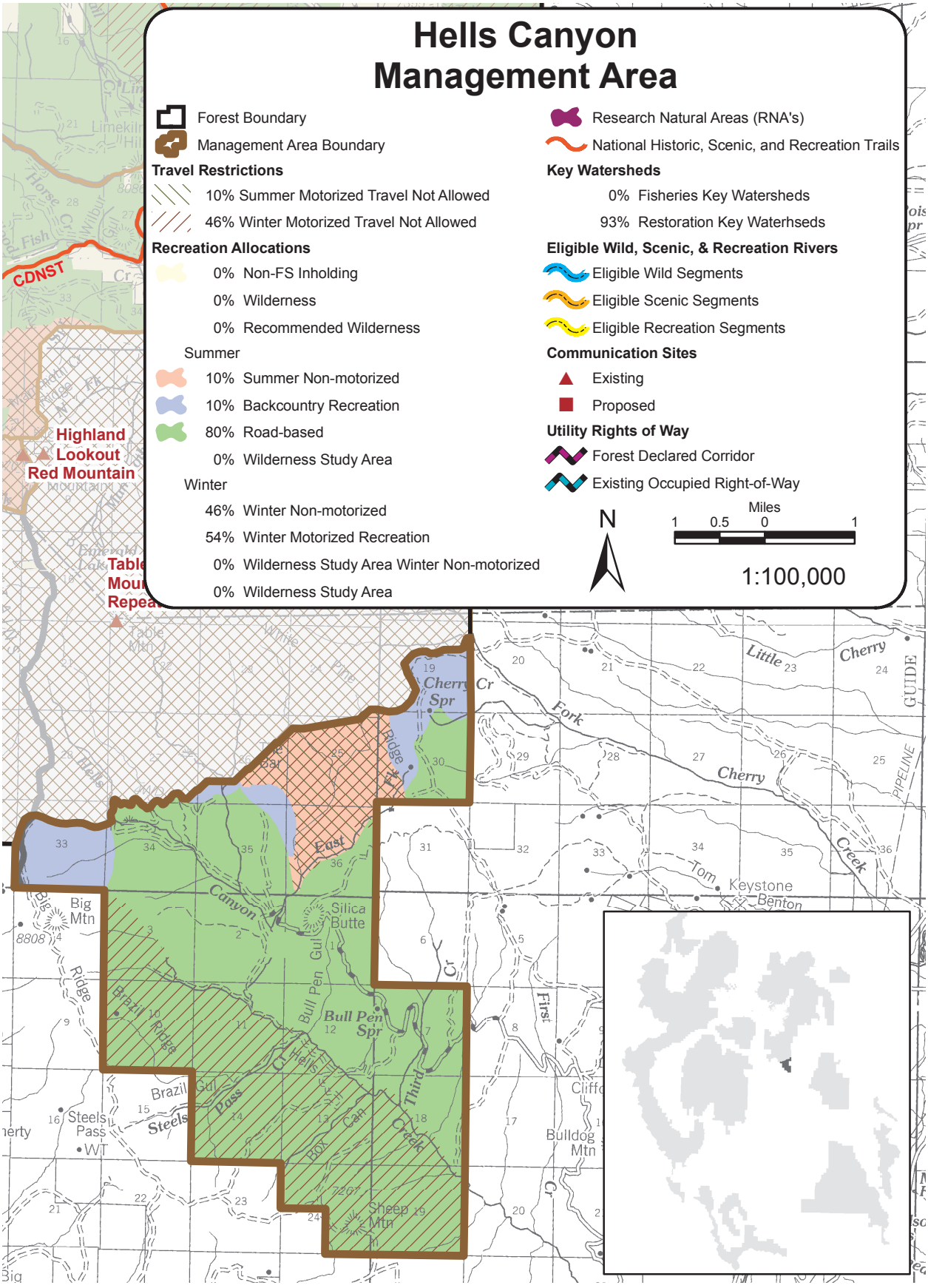
Objectives in addition to Forestwide Objectives

Construct a trailhead at Burton Park at the terminus of Trail #106 and a trailhead and day use area where the Continental Divide crosses Highlands Road

Acquire public access to the area north of Climax Gulch for non-motorized recreation

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate


Hells Canyon
Management Area
Forest Boundary
Management Area Boundary
Travel Restrictions
10% Summer Motorized Travel Not Allowed
46% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
10% Summer Non-motorized
10% Backcountry Recreation
80% Road-based
0% Wilderness Study Area
Winter
46% Winter Non-motorized
54% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Key Watersheds
0% Fisheries Key Watersheds
93% Restoration Key Waterhseds
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000
CDNST
Highland
Lookout
Red Mountain
Cherry Spr
Little Cherry Creek
Cherry Creek
Keystone
Benton
Big Mtn
Silica Butte
Bull Pen Spr
Steels Pass
Sheep Mtn
Bulldog Mtn
Pipeline

Hells Canyon Management Area

This area is managed for a mix of forest uses including livestock grazing, firewood gathering, and backcountry recreation.

The recreation setting is mostly roaded with low density motorized access in a mostly natural appearing setting. Visitors are mostly local residents who use Hells Canyon for firewood cutting, camping, hunting and recreational driving. Motorized use is allowed on roads and trails in much of the area. Winter recreation use is light with some cross-country skiing, mostly to Hells Canyon Rental Cabin. The lack of precipitation rarely leaves enough snow for snowmobiling on the east side of the management area.

Hells Canyon is managed to restore desirable watershed conditions. This an important rainbow trout spawning stream for the Jefferson River

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle riders on roads and trails in summer, fall, and winter

Dispersed camping along forest roads

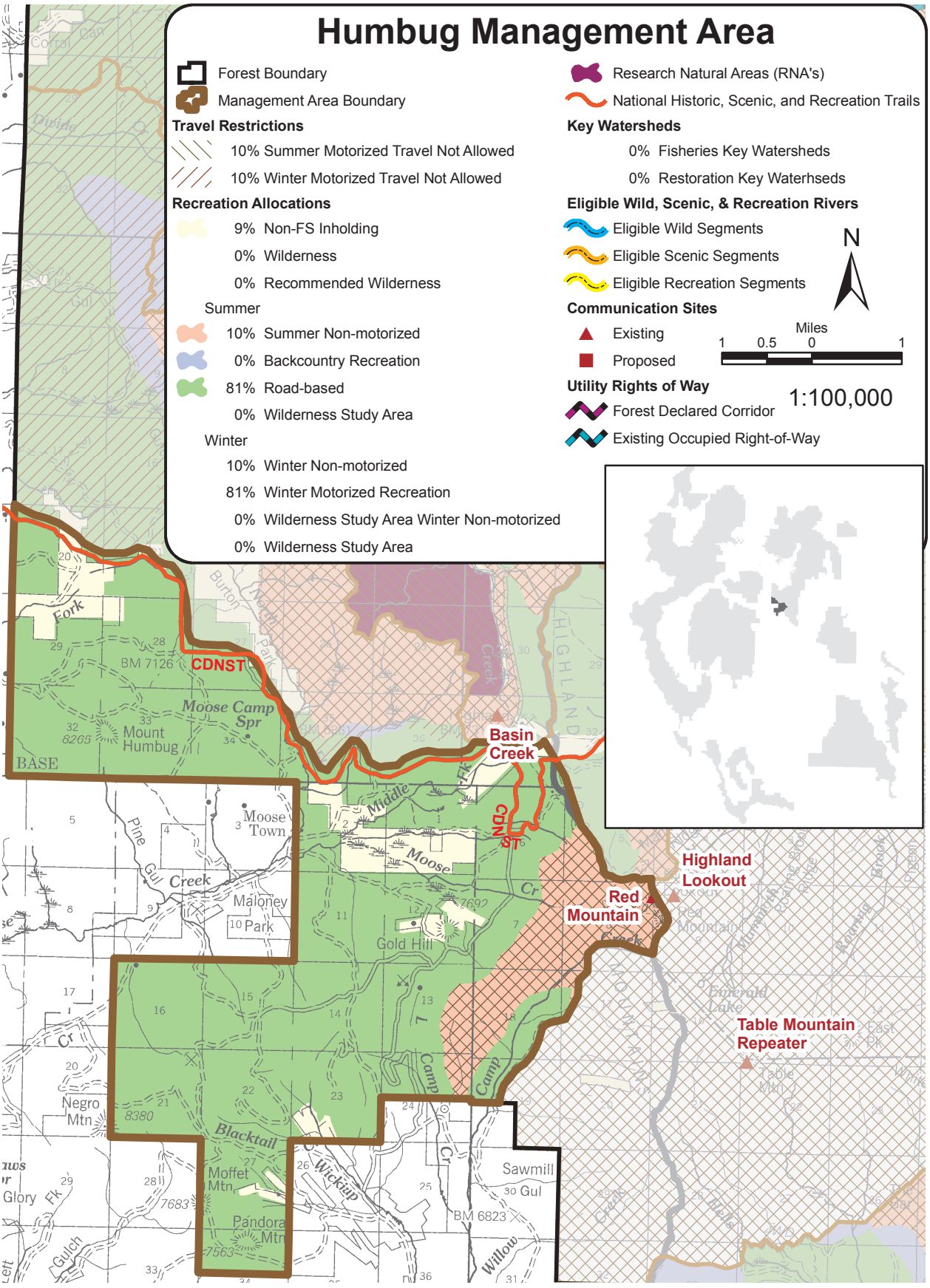
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate


Humbug Management Area
Forest Boundary
Management Area Boundary
Travel Restrictions
10% Summer Motorized Travel Not Allowed
10% Winter Motorized Travel Not Allowed
Recreation Allocations
9% Non-FS Inholding
0% Wilderness
0% Recommended Wilderness
Summer
10% Summer Non-motorized
0% Backcountry Recreation
81% Road-based
0% Wilderness Study Area
Winter
10% Winter Non-motorized
81% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000
CDNST
Basin Creek
Highland Lookout
Red Mountain
Table Mountain Repeater
Mount Humbug
Moose Camp Spr
Moose Town
Maloney Park
Gold Hill
Negro Mtn
Moffet Mtn
Pandora Mtn
Sawmill
BM 7126
BM 6823
BASE
Pine Gulch Creek
Middle Fk
Moose Cr
Camp Cr
Blacktail
Wickiup
Willow
Glory Fk
Gulch
Emerald Lake
Red Mountain Creek
Table Mtn

Humbug Management Area

This area is managed for timber production, livestock grazing, and dispersed recreation opportunities.

Recreation takes place in a roaded setting with a mix of modified and natural appearing scenery. The area has a history of use for timber production and mining. Evidence of historic mining is common, private in-holdings established as mining claims are scattered throughout. The historic privately owned Moosetown is surrounded by National Forest. Roads through this area connect Humbug Spires Wilderness Study Area, Upper Basin Creek to Roosevelt Drive and Fish Creek, and the top of the Continental Divide. Driving for pleasure is a common activity. Recreation use is heavy during fall hunting season. The area is used by snowmobiles in winter.

A non-motorized summer and winter area on the east edge of the unit below Red Mountain provides year around wildlife security for species including bighorn sheep.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicle riders on roads and trails in summer, fall, and winter

Remnants of historic mining and present day mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Segregate opportunities for full size highway vehicles and ATVs

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Level (viewed from Humbug Spires WSA) - Moderate

Pipestone Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 10% Summer Motorized Travel Not Allowed
- 26% Winter Motorized Travel Not Allowed

Recreation Allocations

- 5% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 10% Summer Non-motorized
- 2% Backcountry Recreation
- 83% Road-based
- 0% Wilderness Study Area

Winter

- 26% Winter Non-motorized
- 69% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 6% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:126,720

CDNST

Lost Park RNA

Dry Mountain RNA

Homestake Pass

Donald R Site

Basin Creek RNA

Basin Creek

Highland Lookout

Red Mountain

Table Mountain Repeater

Pipestone Management Area

This area is managed for a mix of uses, including timber production and concentrated motorized recreation opportunities.

The recreation setting is roaded with a mix of modified and natural appearing scenery. North of the Interstate, heavily used roads and trails are dense. Motorcycles, ATVs, full size vehicles as well as mountain bikers and rock climbers frequent the Spire Rock area and adjacent trail system. Snow is light most winters, allowing access for hikers and ATVs. Delmoe Lake is the closest large reservoir to Butte. The campground and day use areas host visitors with motorized watercraft. South of the interstate, Toll Mountain Campground, near Highway 2, provides camping and day use among the giant boulder strewn conifer forest.

A water transmission line, a natural gas and four electrical transmission lines, and a communication site are located in this management area. There are several special use recreation residences and private subdivisions in the Toll Mountain area.

Halfway Creek is managed to conserve native fish populations.

Winter closures on the north end protect the Bull Mountain game range. On the south end they provide quiet recreation opportunities accessible from Pipestone Highway

Noxious weed infestations along Highway 2 and adjacent private lands are a priority for treatment and demand consistent management attention.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicles on roads and trails year around

Remnants of historic and current mining or reclamation

Travel restrictions near elk winter ranges

Livestock

Objectives in addition to Forestwide Objectives

Accommodate recreational demand for a mostly motorized trails network in this area

Reduce risk of wildfire near private property through vegetation treatments

Develop information and interpretive signs at Homestake Pass to highlight recreation opportunities in the area

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Table Mountain Recommended Wilderness Management Area

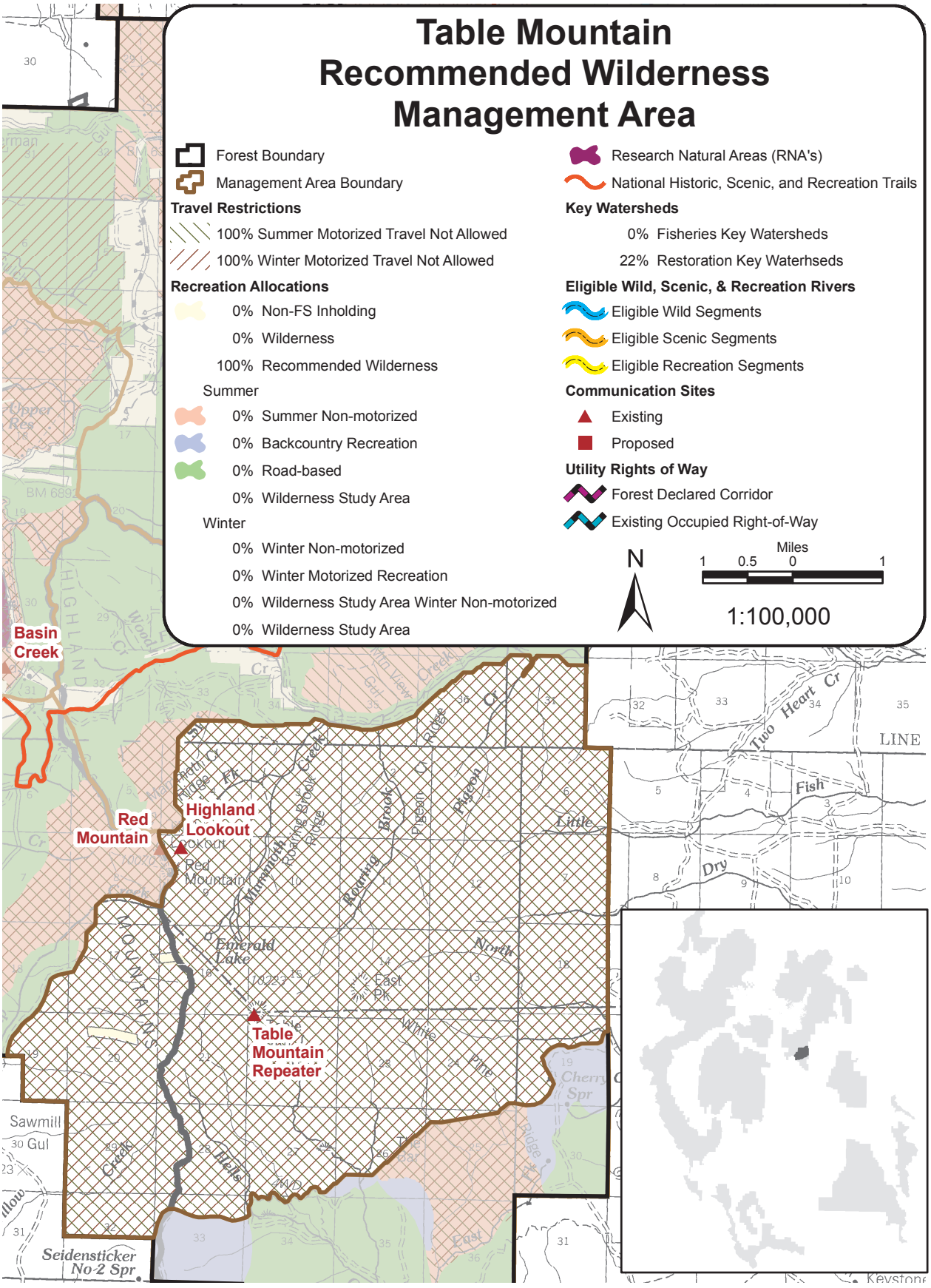


Table Mountain Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and to provide yearlong non-motorized recreation with high levels of challenge and solitude.

The recreation setting is semi-primitive non-motorized. This area offers a unique opportunity for quiet and solitude. Trail access is limited but off trail day hiking opportunities are good. Hunting is one of the predominant activities in the area. Entry into a portion of the area is prohibited yearlong by a closure order for the protection of public health and safety.

Vegetation is managed primarily through natural or prescribed fire. Active restoration of Hells Canyon watershed takes place in the lower reaches of the watershed, outside of this management area.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes from fire and other natural events

Many wildlife species, including mountain goats and bighorn sheep

Livestock

Objectives in addition to Forestwide Objectives

Develop an access point and trailhead on the eastern edge of the Forest Boundary

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective – Very High

Management changes if released from wilderness designation

Semi-primitive non-motorized summer and winter

Minimum Scenic Integrity Objective – High

Mountain bikes are allowed

Whitetail Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 68% Summer Motorized Travel Not Allowed
- 56% Winter Motorized Travel Not Allowed
- Motorized Travel Not Allowed Exception

Recreation Allocations

- 1% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 68% Summer Non-motorized
- 16% Backcountry Recreation
- 15% Road-based
- 0% Wilderness Study Area

Winter

- 57% Winter Non-motorized
- 42% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 43% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

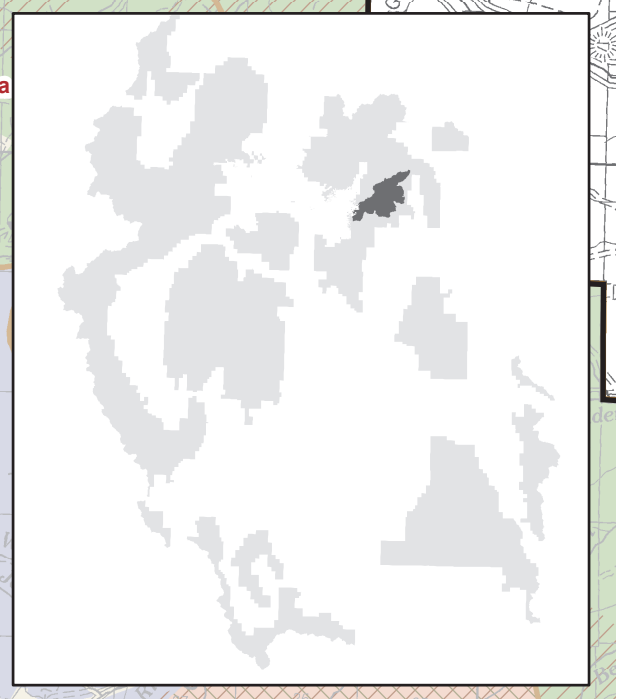
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000



Haystack Mtn NRT

CDNST

Whitetail Rim

Lost Park RNA

Dry Mountain RNA

Iris Seep

Galena

Whitetail Management Area

This area is managed for semi-primitive recreation and secure wildlife habitat.

The recreation setting is semi-primitive with natural appearing scenery. Most of the Whitetail area is unroaded. The road developed for the Whitetail Water User's Association is the only road to the reservoir and is open to the public. The area contains a low density of motorized trails in a mostly undeveloped backcountry setting. Recreation use is mix of dispersed motorized and non-motorized in summer and fall hunting season Snowmobile use is light, on roads, trails, and the open area around Whitetail Reservoir. Winter motorized closures provide secure wildlife habitat.

Whitetail Reservoir is a 1000 acre wetland system in the middle of the area. Elk calve in the meadows and parks north of Whitetail Reservoir. Halfway and Whitetail Creeks are fisheries key watersheds, managed to conserve native fish populations.

Livestock grazing is a valued traditional use of the area, managed to protect soils and riparian vegetation in wet meadow areas.

Recreation residences are authorized in the Halfway Creek area.

Visitors may encounter

Slight vegetation changes from timber harvest or fire

Motor vehicles on the road and on trails in summer and fall

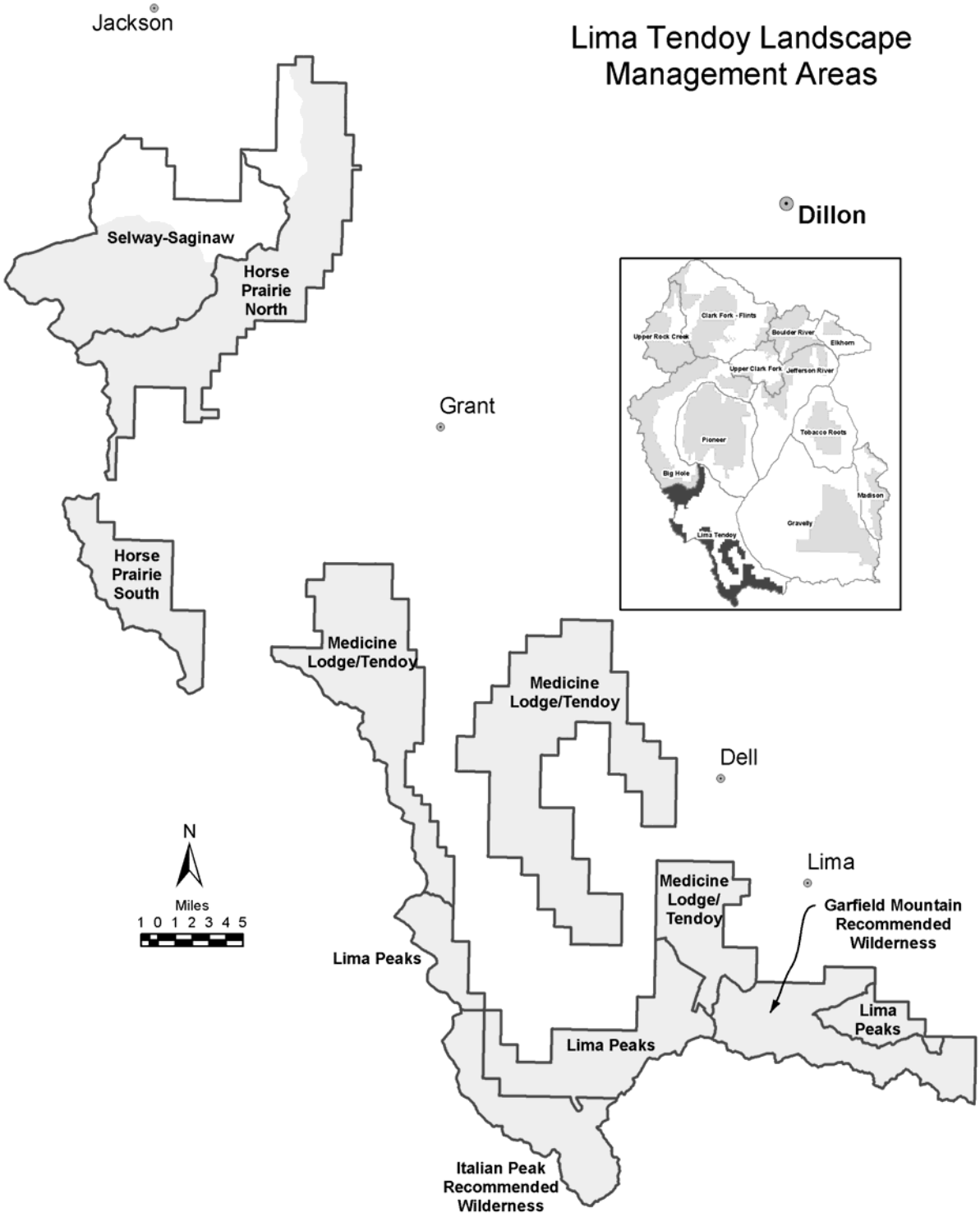
Livestock

Objectives in addition to Forestwide Objectives

Improve stream bank vegetation conditions and reduce sediment sources on Halfway Creek and Whitetail Creek

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High


Lima Tendoy Landscape
Management Areas
Jackson
Dillon
Grant
Dell
Lima
Selway-Saginaw
Horse
Prairie
North
Horse
Prairie
South
Medicine
Lodge/Tendoy
Medicine
Lodge/Tendoy
Medicine
Lodge/
Tendoy
Garfield Mountain
Recommended
Wilderness
Lima Peaks
Lima Peaks
Lima
Peaks
Italian Peak
Recommended
Wilderness
N
Miles
1 0 1 2 3 4 5
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Pioneer
Tobacco Roots
Big Hole
Madison
Gravelly
Lima Tendoy

LIMA TENDOY LANDSCAPE

The Lima Tendoy Landscape is located in the southwest corner of Montana. BLM lands are a large component of the overall landscape. The Horse Prairie and Big Sheep Creek Valleys surround the Tendoy Mountains. These valleys in turn are bordered by the Beaverhead Mountains, the crest of which form the Idaho border and Continental Divide. This section of the Continental Divide contains one of the tallest groups of mountain peaks in Montana. Along the southern edge of the landscape grasslands uniquely transition directly to rocky peaks, without the usual band of conifers between these two cover types.

National Forest lands in this landscape are dominated by sagebrush-grasslands. Forests include lodgepole pine, dry site Douglas-fir, spruce and subalpine fir, and whitebark pine. Wet meadows, aspen stands, and riparian willow zones are common within both of these general vegetation types. The Forest provides habitat for a wealth of birds, waterfowl, small mammals, and big game species, including elk, moose, bighorn sheep, and mountain goats. Habitat along the Continental Divide links wildlife in the Centennial, Lima Tendoy, and Beaverhead mountains, and provides a connection between the Greater Yellowstone and Bitterroot Ecosystems. Sage grouse migrate over the divide between Montana and Idaho.

Grasslands dominate, making livestock grazing a valued traditional use. This landscape includes the second largest area on the Forest with moderate potential for oil and gas. Numerous historic and prehistoric Native American sites date back at least 12,000 years.

Recreation use is usually most concentrated during hunting season. In the summer months people occasionally use roads, dispersed campsites, the Continental Divide National Scenic Trail, the Nez Perce National Historic Trail, and the Lewis and Clark National Historic Trail. The only National Landmark on the Forest, Lemhi Pass National Historic Landmark, is located along the Continental Divide and managed jointly with the Salmon-Challis National Forest.

Garfield Mountain Recommended Wilderness Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Inholding
- 0% Wilderness
- 100% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

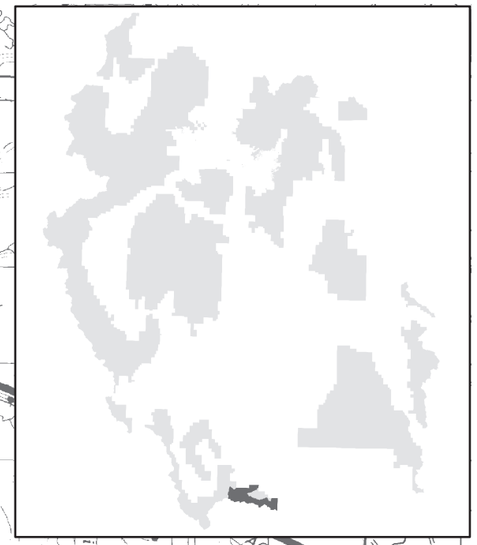
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 0.5 0 0.5 1

1:100,000



Garfield Mountain Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and provide recreation with high levels of challenge and solitude.

The setting is semi-primitive with natural appearing scenery. Summer recreation includes light non-motorized use on roads and trails. Dispersed use is heaviest in hunting season.

The area has high quality big game winter range.

Livestock grazing is a valued use in this management area. Otherwise, vegetation is managed through prescribed and natural fire.

Visitors may encounter

Native vegetation changes only from fire and other natural events

Wildlife, including forest carnivores

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Very High

Management of the area if released from wilderness designation

Semi-primitive non-motorized summer and a mix of semi-primitive motorized and non-motorized in winter (as mapped in Alternative 5)

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

Horse Prairie North Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 49% Summer Motorized Travel Not Allowed
- 27% Winter Motorized Travel Not Allowed

Recreation Allocations

- 1% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 49% Summer Non-motorized
- 17% Backcountry Recreation
- 33% Road-based
- 0% Wilderness Study Area

Winter

- 27% Winter Non-motorized
- 72% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 100% Wilderness Study Area

Key Watersheds

- 39% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:126,720

Deadhorse Repeater (Off NF)

Big Hole Landscape

Lima Tendoy Landscape

Bloody Dick Peak

Horse Prairie RNA

Lemhi Pass

CDNST

LCNHT

NPNHT

Horse Prairie North Management Area

This area is managed for dispersed recreation, historic preservation, and forest products.

The recreation setting includes roaded and semi-primitive areas with both altered and natural appearing scenery. Locally and nationally, the area is unique for its included Lemhi Pass National Historic Landmark and three National Trail sections. The road system includes the graveled county road across Lemhi Pass, a mile of Highway 278, and several system and primitive roads along the Forest boundary. Hunting, traveling along national trails, Lemhi Pass interpretation, hiking, mountain biking, and ATV riding on primitive roads and trails are common activities. Snowmobiling is the most common winter recreation, with many people accessing the area from Idaho. The distance from populated areas and access make cross country skiing uncommon.

Winter motorized closures on the north end provide secure winter wildlife habitat.

Vegetation is managed through timber harvest and timber production, livestock grazing, and with fire or other natural changes.

Buffalo, Fox, Reservoir, and Painter Creeks are fisheries key watersheds, managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles and mountain bike riders on a variety of roads and trails in the foothills

Visitors at Lemhi Pass or traveling along national trails

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Expansion of the utility corridor or its uses in areas visible from Lemhi Pass National Historic Landmark is not allowed

Horse Prairie South Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 57% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 57% Summer Non-motorized
- 22% Backcountry Recreation
- 21% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 100% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 36% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 1 0.5 0

1:63,360



Horse Prairie South Management Area

This area is managed for livestock grazing and remote dispersed recreation.

The recreation setting is mostly semi-primitive non-motorized with some backcountry and roaded areas. The area is remote from populated areas and access is primitive. Backcountry recreation, including hunting, traveling along the continental divide, hiking, mountain biking, and ATV riding on primitive roads and trails is available but use outside of hunting season is light. The entire area is open to travel in winter. Snowmobiling is the most common winter recreation. Some visitors access the area from Idaho. The distance from populated areas and access make cross country skiing uncommon.

Vegetation is managed through grazing allotments and with fire or other natural changes.

Bear Creek is a fisheries key watershed, managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles and mountain bike riders on a variety of roads and trails in the foothills

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Italian Peak Recommended Wilderness Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 100% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 16% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000



Italian Peak Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and provide non-motorized recreation with high levels of challenge and solitude.

The Italian Peak area has been recommended for wilderness designation since 1986, in combination with adjacent lands in Idaho on the Targhee-Caribou National Forest and Bureau of Land Management. The recreation setting is semi-primitive non-motorized recreation. Recreation use in the area is highest in hunting season. Other common activities are hiking, horse use, dispersed camping, and fishing.

Vegetation is managed through prescribed and natural fire and livestock grazing.

Nicholia Creek is a fisheries key watershed, managed to conserve native fish populations.

Visitors may encounter

Native vegetation changes only from fire or other natural events

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective – Very High

Management changes if released from wilderness designation

Semi-primitive non-motorized summer (as mapped in Alternative 1) and winter

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

Lima Peaks Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 32% Summer Motorized Travel Not Allowed
- 55% Winter Motorized Travel Not Allowed

Recreation Allocations

- 2% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 32% Summer Non-motorized
- 58% Backcountry Recreation
- 8% Road-based
- 0% Wilderness Study Area

Winter

- 55% Winter Non-motorized
- 43% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 5% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
0.5 0 0.5 1 1.5

1:150,000

White Pine Ridge

Beagle Springs

CDNST



Lima Peaks Management Area

This area is managed for livestock grazing, dispersed recreation, and wildlife habitat.

The setting is semi-primitive with predominantly natural appearing scenery. Summer recreation includes light motorized and non-motorized use on roads and trails. The heaviest recreation use is in hunting season. Trailheads on low standard roads provide access to the Continental Divide National Scenic Trail.

Winter non-motorized allocations provide secure winter habitat for big game.

Vegetation may be managed by grazing, timber harvest, or fire. Oil and gas exploration is likely here on lands with moderate potential for these resources.

Lower Nicholia Creek is a fisheries key watershed managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle and mountain bikers on a variety of roads and trails in the foothills

Dispersed amp sites along roads

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

Improve access to the Italian Peaks Recommended Wilderness by constructing a trailhead on the Nicholia Creek road

Standards in addition to Forestwide Standards

No net increase in roads. Existing roads may be reconstructed to trailheads

Medicine Lodge - Tendoy Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 29% Summer Motorized Travel Not Allowed
- 42% Winter Motorized Travel Not Allowed

Recreation Allocations

1% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

29% Summer Non-motorized
49% Backcountry Recreation
21% Road-based
0% Wilderness Study Area

Winter

42% Winter Non-motorized
57% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1 2

1:200,000

Maiden Peak
Ellis Peak
Sourdough Peak Repeater
White Pine Ridge
Beagle Springs
CDNST

Medicine Lodge - Tendoy Management Area

This area is managed for livestock grazing, dispersed recreation, and wildlife habitat.

The recreation setting is mostly semi-primitive with natural appearing scenery. Most of the area roads are primitive. The Continental Divide National Scenic Trail is located in Idaho rather than in this area for most of this stretch of the Continental Divide. The majority of recreation here occurs in hunting season.

Winter non-motorized allocations provide secure winter habitat for big game.

Timber harvest or fire may be used to achieve vegetation and other resource objectives. Other land uses may include livestock grazing, mining and oil and gas exploration.

Visitors may encounter

Vegetation changes from timber harvest or fire

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Selway-Saginaw Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 21% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 3% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 21% Summer Non-motorized
- 27% Backcountry Recreation
- 49% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 97% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 18% Fisheries Key Watersheds
- 14% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

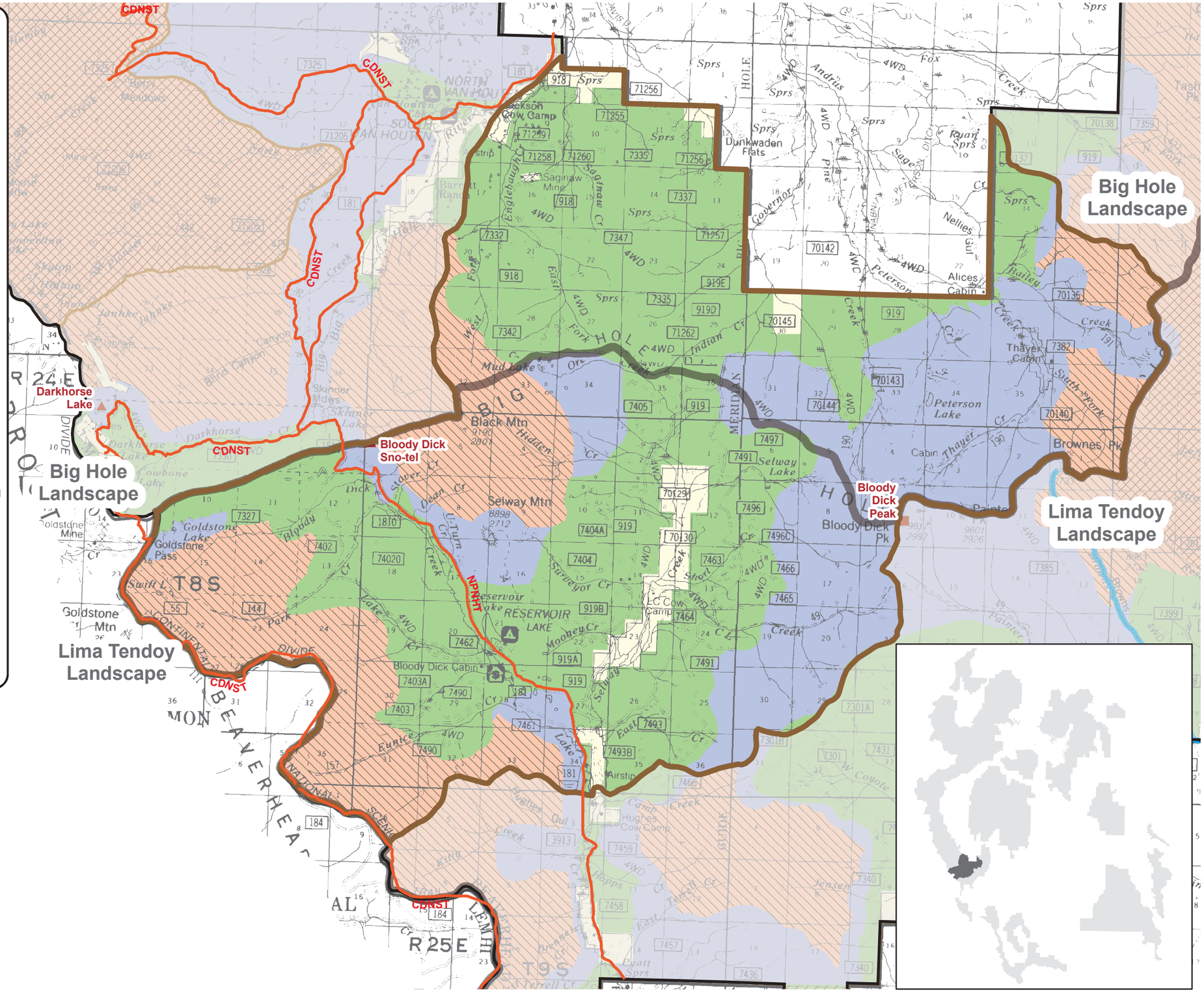
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 0.5 0 0.5 1 1.5

1:100,000



Selway - Saginaw Management Area

This area is managed for timber production, livestock grazing, and dispersed recreation. The Selway-Saginaw area includes lands in the Big Hole and Lima Tendoy Landscapes. Stringer meadows are included in the mostly forested lands at the headwaters of the Big Hole River.

The setting is a mix of roaded and semi-primitive with altered and natural appearing scenery. Reservoir Lake Campground provides opportunity for boating (non-motorized or electric powered), fishing, and camping. Other recreation activities include motorized and non-motorized travel in summer along roads and trails, and dispersed camping. Hunting takes place in a largely non-motorized setting due to seasonal closures. Snowmobiling is a popular winter day use and is most common on roads.

Saginaw is a restoration key watershed managed to restore desirable watershed conditions. Andrus Creek is a fisheries key watershed managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle and mountain bike riders on roads and trails in the foothills

Campers dispersed along roads and at developed campgrounds

Snowmobilers

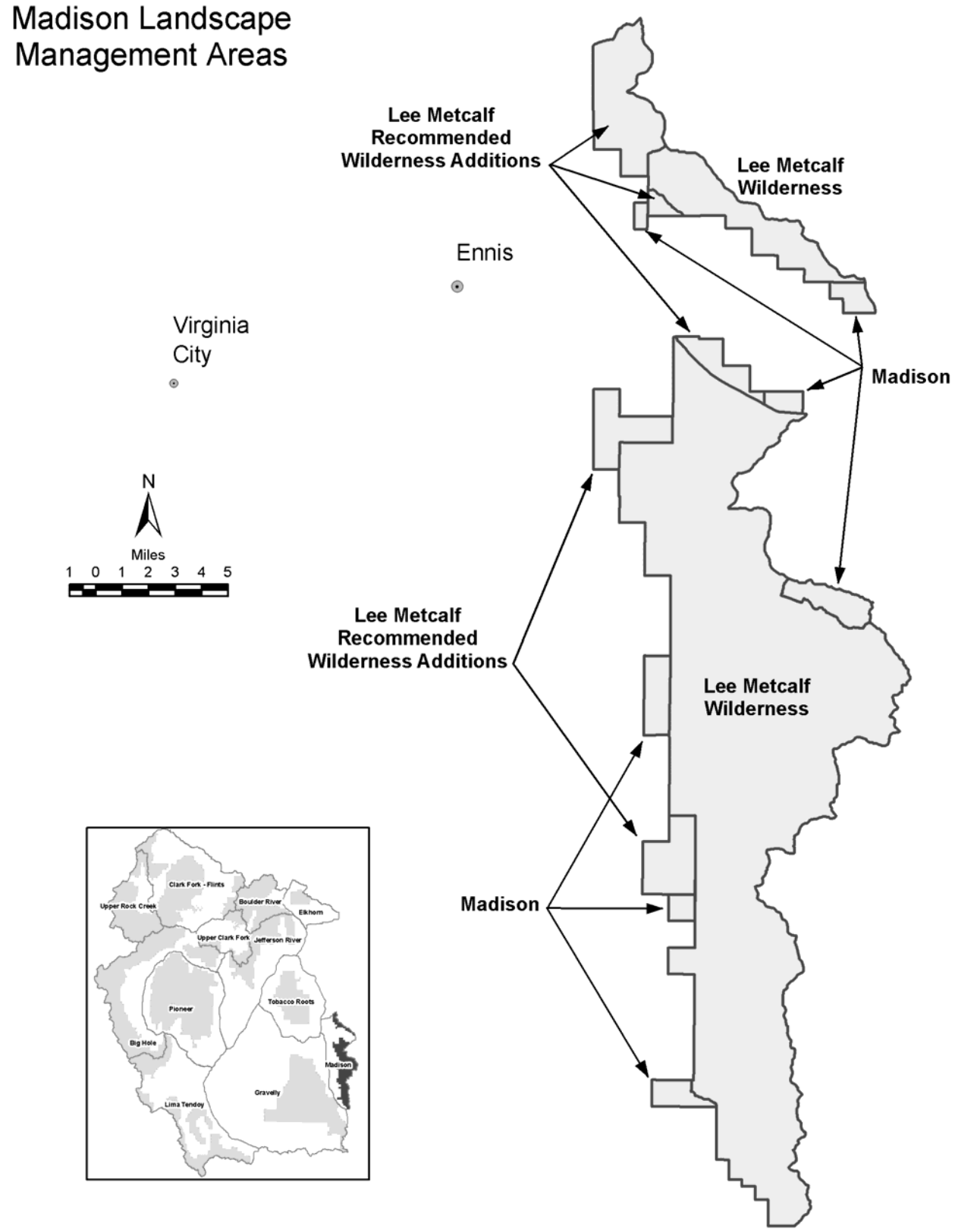
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


Madison Landscape Management Areas
Lee Metcalf Recommended Wilderness Additions
Lee Metcalf Wilderness
Ennis
Virginia City
Madison
N
Miles
1 0 1 2 3 4 5
Lee Metcalf Recommended Wilderness Additions
Lee Metcalf Wilderness
Madison
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Tobacco Roots
Pioneer
Big Hole
Madison
Gravelly
Lima Tendoy

MADISON LANDSCAPE

The BDNF portion of the Madison Landscape includes two pieces of land along the west-facing slope of the Madison Range from Bear Trap Canyon on the north to Quake Lake on the south. Distinctive peaks of the Madison Range forms the scenic backdrop above the Madison Valley. Though the area is narrow it contributes a wealth of mountain vegetation, high lakes, and the distinctive Sphinx and Helmet Mountains. Streams flow into the Madison River, a world-renowned and regionally important class one trout stream.

The Madison Range is part of the Greater Yellowstone Ecosystem. Large blocks of secure habitat for wildlife characterize the landscape. Species such as wolves, elk, and grizzly bears move freely to and from Yellowstone Park via the Madison Range. Goats, bighorn sheep, wolverine, mountain lions and other fauna find a home in this landscape as well. Wildlife also moves from the Madison Range to other parts of southwest Montana through stringers of riparian vegetation and timber found in Wolf Creek, Papoose Creek, and other areas.

Nearly all of the land managed by the BDNF in the Madison Range is in the Lee Metcalf Wilderness. The Wilderness is managed to retain the areas natural ecosystem parts and function and to provide challenging primitive recreation opportunities. Private land along the Jack Creek Road between Ennis and Big Sky splits the otherwise contiguous landscape.

Travelers to Yellowstone National Park on Highway 287 through the Madison Valley enjoy views of the Madison Range from the highway. Recreation use however, is less influenced by proximity to Yellowstone Park than its own wilderness character and accessibility. Hikers, climbers, or horseback riders find wild and primitive settings in this landscape with few social encounters. Summer use is moderate. Fall hunting has been heavy for decades. Winter use is light because roads to trailheads are closed by snow. Bear Creek is one of the more accessible areas where cross-country skiing is popular and winter activities like mountaineering and ice climbing are emerging. Motorized access on National Forest is confined to snowmobiling at McAtee Basin and Bear Creek Cabin.

Lee-Metcalf Wilderness Management Area

Forest Boundary

Management Area Boundary

Research Natural Areas (RNA's)

National Historic, Scenic, and Recreation Trails

Travel Restrictions

98% Summer Motorized Travel Not Allowed

98% Winter Motorized Travel Not Allowed

Recreation Allocations

2% Non-FS Inholding

98% Wilderness

0% Recommended Wilderness

Summer

0% Summer Non-motorized

0% Backcountry Recreation

0% Road-based

0% Wilderness Study Area

Winter

0% Winter Non-motorized

0% Winter Motorized Recreation

0% Wilderness Study Area Winter Non-motorized

0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds

0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

Eligible Wild Segments

Eligible Scenic Segments

Eligible Recreation Segments

Communication Sites

Existing

Proposed

Utility Rights of Way

Forest Declared Corridor

Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1 2 3

1:200,000

GoldButte

Feeezeout Mountain

Flatiron Mountain

Lee Metcalf Wilderness Management Area

This area is managed to protect wilderness characteristics and values and provide primitive recreation with high levels of challenge and solitude.

Recreation takes place in a primitive to semi-primitive non-motorized setting guided by Wilderness regulations. The Lee Metcalf Wilderness, designated in 1983, includes parts of both the Gallatin and Beaverhead-Deerlodge National Forests, and BLM lands. The wilderness is split on the north end by the Jack Creek drainage, which is privately owned and roaded. Development in close proximity to all sides of the wilderness increases management challenges.

This side of the Lee Metcalf Wilderness receives moderate recreation use in the summer. Sphinx Mountain, Bear Creek and Indian Creek trail systems attract most users. During fall hunting season, trailheads and campgrounds accessing the area are full of hunters traveling by foot or horseback. Winter use is light due to limited access to snow.

Prohibitions on motorized use contribute to important wildlife security in this area. Wildlife moves from Yellowstone, through the Madison Range to other parts of southwest Montana through stringers of riparian vegetation and timber in places like Wolf and Papoose creeks. The Hilgard area is in the Grizzly Bear Recovery Area.

Visitors may encounter

Native vegetation changes only from fire or other natural events

Quiet natural landscapes and few visitors

Grizzly bears

Pack stock

Objectives in addition to Forestwide Objectives

Resolve inconsistent access and management with State land in Bear Creek

Improve access to the Wilderness at Indian and South Indian Creeks

Evaluate additional access between Indian Creek and Papoose Creek

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Very High

The Lee Metcalf Wilderness Plan provides additional standards

Lee-Metcalf Recommended Wilderness Additions Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Non-FS Inholding
- 0% Wilderness
- 100% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1 2

1:150,000



Lee Metcalf Recommended Wilderness Additions Management Area

This area is managed to protect wilderness characteristics and values and to provide non-motorized recreation opportunities with high levels of challenge and solitude.

Recreation settings are semi-primitive non-motorized with wilderness characteristics.

Cowboy Heaven (Unit #1) lies between Bear Trap Canyon and the Spanish Peaks. Steep canyons and gentle ridge tops are accessed through two trailheads; the Bear Trap Canyon or a long trail from Spanish Creek.

The Jordain Unit (#2), Fan Mt. Unit (#3), Shell Creek Unit (#4) and Corral Creek Unit (#5) are isolated because access to these units is available only through the Wilderness.

The Papoose Bench Unit (#6) is easily accessible from Highway 287. This parcel contributes to elk winter range and spring elk calving habitat and links the Madison Range to the Gravelly Range.

Visitors may encounter

Native vegetation changes only from fire or other natural events

Quiet natural landscapes and few visitors

Grizzly bears

Livestock

Backcountry hunting camps (Cowboy Heaven, Papoose Bench)

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective – Very High

Management changes if released from wilderness designation

Semi-primitive non-motorized summer and winter

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

Madison Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 69% Summer Motorized Travel Not Allowed
- 38% Winter Motorized Travel Not Allowed

Recreation Allocations

- 27% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 69% Summer Non-motorized
- 0% Backcountry Recreation
- 4% Road-based
- 0% Wilderness Study Area

Winter

- 38% Winter Non-motorized
- 35% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

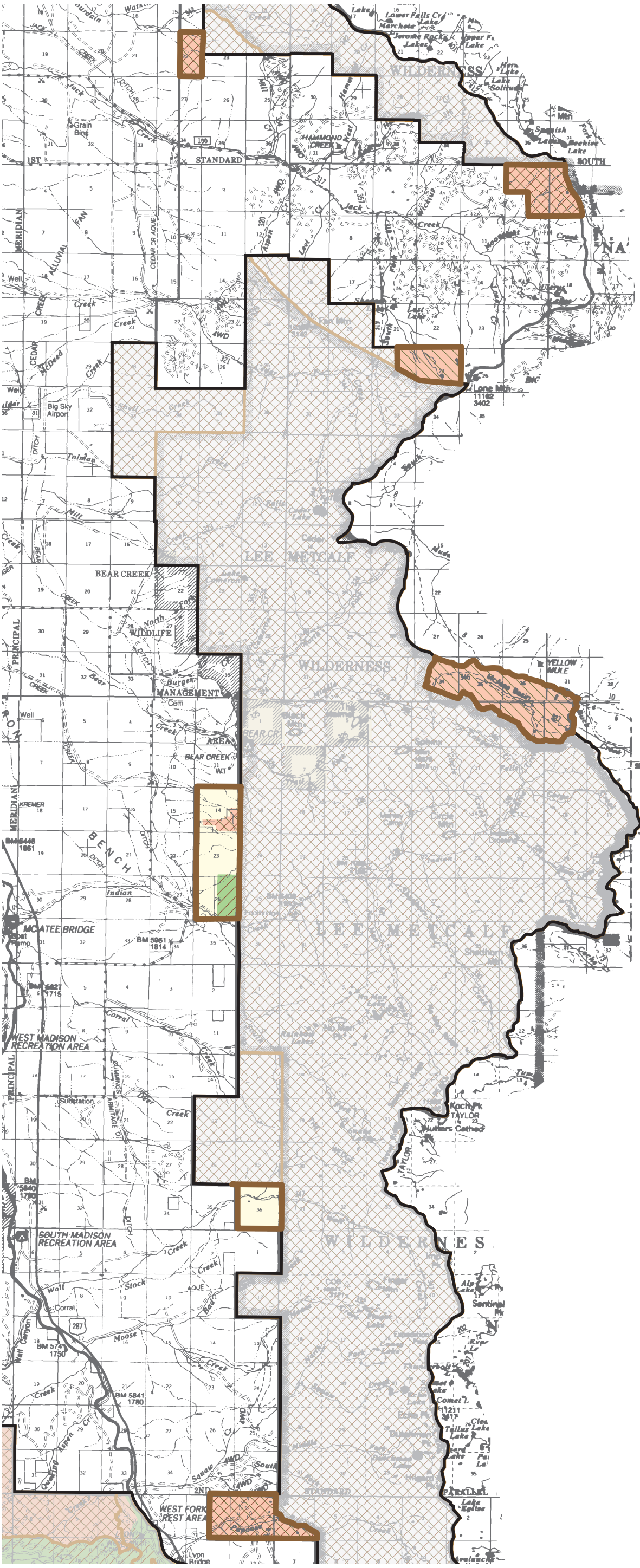
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1 2

1:150,000





Madison Management Area

These areas are managed to provide access and a transition between the Lee Metcalf Wilderness and adjacent developed land and to provide semi-primitive recreation opportunities.

This management area includes four separate parcels along the edge of the Lee-Metcalf Wilderness and the Bear Creek administrative site and campground. With the exception of Bear Creek, and McAtee Basin in winter, recreation settings are semi-primitive non-motorized.

Two parcels on the north end, along private land in Jack Creek, provide a transition between wilderness and the high use developed settings of Moonlight Basin and Big Sky resorts.

The Indian Creek parcel lies along the foothills of the Madison Range. Both parcels are adjacent to the Lee Metcalf Wilderness but protrude from the Wilderness out into private lands. Indian Creek parcel is managed to provide vehicle access near the wilderness boundary.

McAtee Basin and the head of Middle Fork of Bear Creek were excluded from wilderness designation to allow snowmobile use between Yellow Mules and Buck Creek on the Gallatin National Forest. It provides a non-motorized summer recreation opportunity and motorized winter opportunities.

Bear Creek administrative site and campground is considered part of this Management Area even though it isn't large enough to show as a mapped unit.. This site provides non-motorized access to the Wilderness.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes only from fires or other natural events

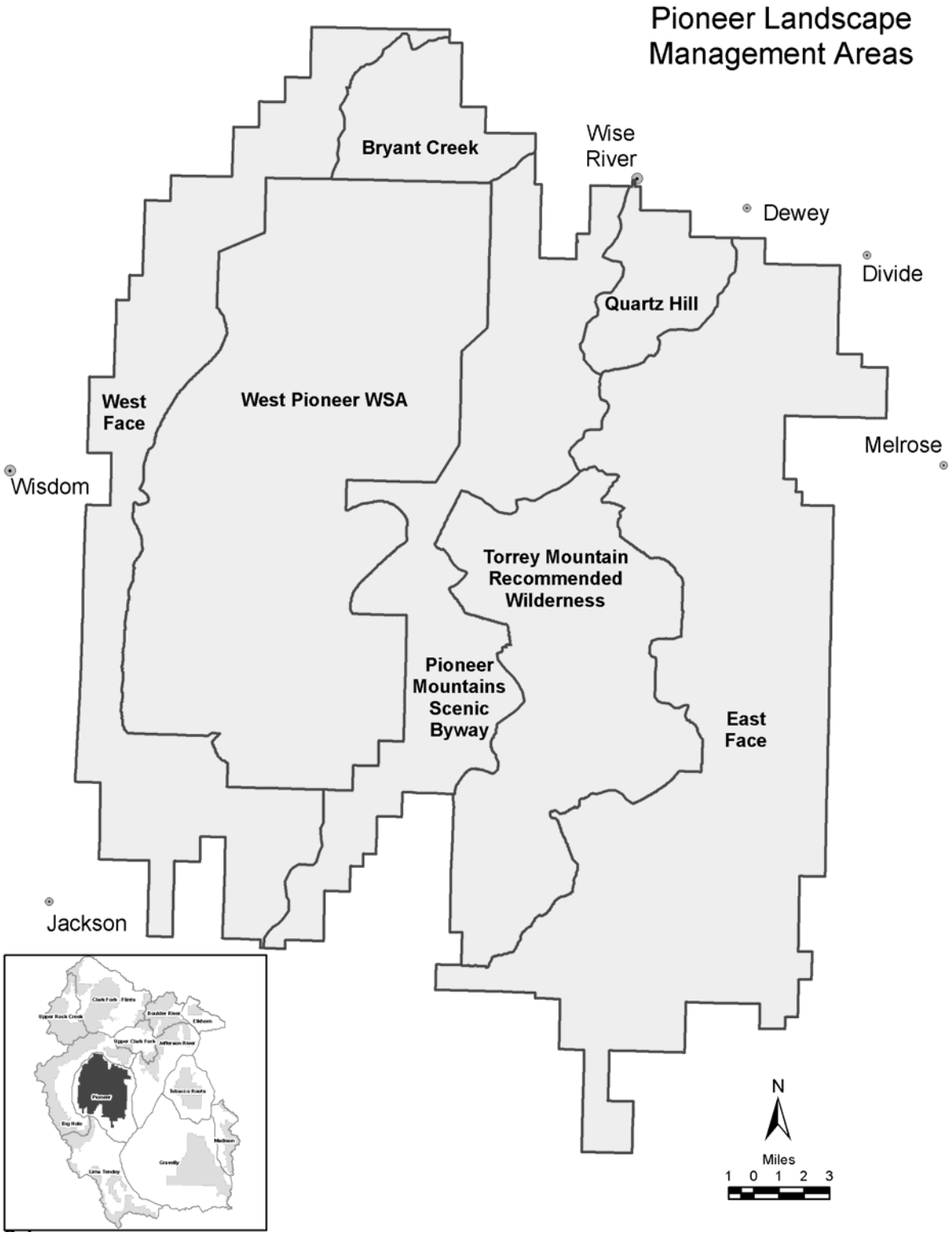
Campers, hikers, and horse riders at Bear Creek, occasional snowmobiles in McAtee, and few visitors in the Jack Creek parcels

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High


Pioneer Landscape
Management Areas
Bryant Creek
Wise
River
Dewey
Divide
Quartz Hill
West
Face
West Pioneer WSA
Melrose
Wisdom
Torrey Mountain
Recommended
Wilderness
Pioneer
Mountains
Scenic
Byway
East
Face
Jackson
N
Miles
1 0 1 2 3

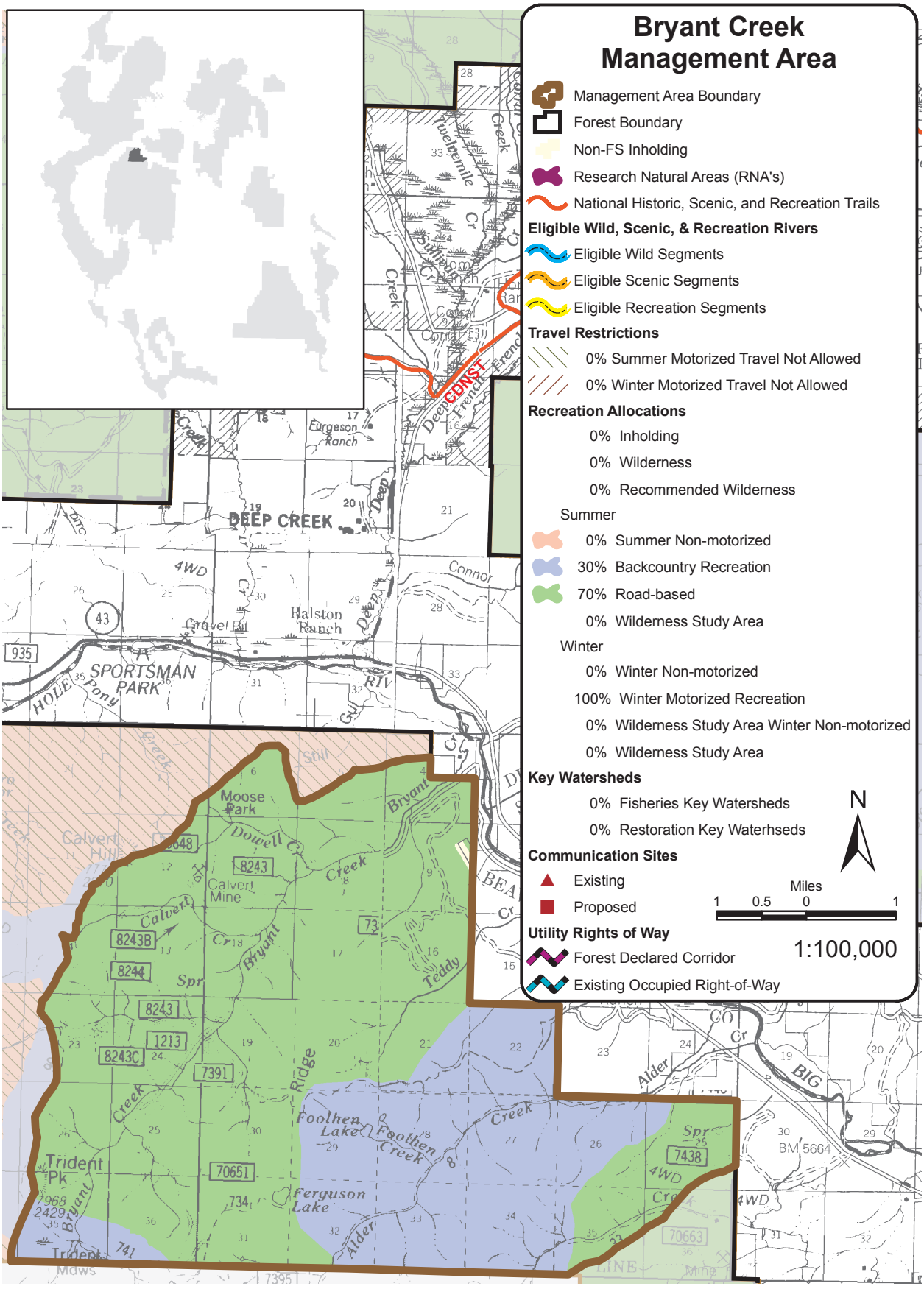
PIONEER LANDSCAPE

The Pioneer Mountains are an island mountain range dominated by rocky peaks. Forest types include lodgepole pine, dry site Douglas-fir, spruce with subalpine fir, and whitebark pine. Lower elevations and valleys are covered by sagebrush and grasslands The forest interior provides secure habitat for a variety of wildlife including lynx and wolverine. Foothills provide big game winter range.

Streams flow into the Big Hole and Beaverhead Class One Trout Streams. Challenges are managing critical fish habitat, recreation, and irrigation, while supplying municipal water for Dillon through Rattlesnake Creek and for Butte and Melrose through the Big Hole River.

The communities of Dillon, Wisdom, Wise River, Dewey, Argenta, Glen, Jackson, Polaris, Melrose, and Divide are located along the highways which surround the landscape. Communities are tied to traditional hunting, grazing, logging, and mining activities, scenery, and recreation opportunities provided by the landscape. The proximity of the backcountry and developed sites to larger urban centers, Dillon and Butte, and Interstate 15 contribute to its popularity.

The Pioneer Landscape offers several important historic features; the Birch Creek Education Center, a historic Civilian Conservation Corps Camp just north of Dillon; the Canyon Creek Kilns above Glendale and Melrose; and the Elkhorn mining district near the Scenic Byway. The most intensively managed feature is the Pioneer Mountains scenic Byway, which offers developed camping, crystal digging at Crystal Park, and access to the West Pioneer Wilderness Study Area and the Torrey Mountain Recommended Wilderness Area. In winter the byway becomes the Wise River National Recreation Trail popular for snowmobiling. Maverick Mountain Ski Resort, and Elkhorn Hot Springs near cross-country and snowmobile trails. Big game hunting is also popular here.


Bryant Creek
Management Area
Management Area Boundary
Forest Boundary
Non-FS Inholding
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
0% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
30% Backcountry Recreation
70% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
100% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000
DEEP CREEK
SPORTSMAN PARK
Moose Park
Calvert Mine
Dowell Creek
Bryant Creek
Teddy Ridge
Foolhen Lake
Foolhen Creek
Ferguson Lake
Trident Pk
Alder Creek
BIG
BM 5664
GDNST
8243
8243B
8244
8243C
1213
7391
70651
7438
70663
935
43

Bryant Creek Management Area

This area is managed for timber production, livestock grazing, and other forest products. The recreation setting includes roaded areas modified by timber harvest and semi-primitive areas with natural appearing scenery. Motorized, mountain bike, and other types of recreational travel on roads and trails are common year long, though some routes are closed to provide for elk security in summer and fall.

Vegetation is managed to provide wood products, reduce fuels, and produce forage for livestock and wildlife.

Visitors may encounter

Vegetation changes following timber harvest or fire

Motor vehicle and mountain bikers on roads and trails in summer and fall

Snowmobilers

Livestock

Objectives in Addition to Forestwide Objectives

None

Standards in Addition to Forestwide Standards

None

East Face Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 9% Summer Motorized Travel Not Allowed
- 22% Winter Motorized Travel Not Allowed

Recreation Allocations

- 2% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 9% Summer Non-motorized
- 42% Backcountry Recreation
- 47% Road-based
- 0% Wilderness Study Area

Winter

- 22% Winter Non-motorized
- 76% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 6% Fisheries Key Watersheds
- 26% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:150,000

Vipond Park / Sheep Mountain

Cattle Gulch RNA

Wise River NRT

Grasshopper Ridge NR

Elkhorn Lake RNA

Mule Creek

Tower Mtn

Wise River NRT

East Face Management Area

This area is managed for livestock grazing and a mix of recreation opportunities easily accessed from Interstate 15.

The area provides a mix of semi-primitive and roaded settings. The terrain, vegetation, and types of past uses, including timber harvest, have resulted in some areas of high open motorized road density. The East Face has a long tradition of use by people from Dillon and other area communities for dispersed recreation yearlong, both motorized and non-motorized. Recreation residence tracts are authorized in several locations.

The Bender Center, University of Montana Western, provides a variety of outdoor education programs and classes. The Canyon, Trapper, Rock, Birch, and French Creek drainages, and Hecla, are areas rich with mining history.

Forage is managed for livestock grazing and for big game winter range on foothill slopes. Vegetation will also continue to be managed using timber harvest and fire.

Winter non-motorized allocations protect big game winter range north of Canyon Creek. South of Rock Creek this allocation provides opportunities for accessible quiet recreation.

There are several reservoirs, which allow popular small lake recreation activities as well as irrigation water for permittees. Active restoration of the Willow Creek, Birch Creek and Lost-Pioneers watersheds takes place in this area. Cherry Creek is managed as a fisheries key watershed for conservation of native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Dispersed campers, motor vehicle and mountain bike riders on roads and trails

Snowmobilers and skiers

Livestock

Objectives in addition to Forestwide Objectives

Develop or improve trailheads and access to motorized and non-motorized recreation opportunities

Improve the quality of motorized trail opportunities

Standards in addition to Forestwide Standards

None

Pioneer Mountains Scenic Byway Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 29% Summer Motorized Travel Not Allowed
- 19% Winter Motorized Travel Not Allowed

Recreation Allocations

5% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

- 29% Summer Non-motorized
- 25% Backcountry Recreation
- 42% Road-based
- 0% Wilderness Study Area

Winter

- 19% Winter Non-motorized
- 76% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:150,000

Pioneer Loop NRT
Wise River NRT
Vipond Park / Sheep Mountain
Skull-Odell RNA
Wise River NRT
Grasshopper Ridge NR
Maverick Mtn
Elkhorn Lake RNA
Wise River NRT
Mule Creek
Tower Mtn
Deadhorse Repeater (Off NF)
Wise River NRT

Pioneer Mountains Scenic Byway Management Area

This area is managed to provide scenic driving and concentrated areas of recreation. Facilities are developed consistent with the theme, “The West the way it used to be.”

The Pioneer Mountains National Forest Scenic Byway is administered by Beaverhead County. Developed recreation facilities are paved along the byway. Campgrounds and trailheads further from the road are gravel surfaced. There are several in-holdings and special use recreation residences. A trailhead provides parking for the trail to the Coolidge Ghost Town.

The byway, and related roads offer a roaded natural setting and a variety of summer activities, especially scenic driving, family camping, natural and cultural history, crystal digging, and back country access. The Byway provides opportunities for fall hunting in a roaded setting, and access points to motorized and non-motorized backcountry trails. Premier snowmobiling along the Wise River National Recreation Trail, the Grasshopper Cross-country Ski Trails, Elkhorn Hot Springs, and Maverick Mountain Ski Resort are popular with both local residents and tourists.

Backcountry and non-motorized areas offer a semi-primitive recreation setting.

Wildlife species traverse the riparian corridors along the Byway. Grazing livestock add their special contribution to the byway theme.

Visitors may encounter

Minor vegetation changes from fire and timber harvest

Many visitors particularly at Crystal Park and campgrounds

ATV, horse, and mountain bike riders on trails

Snowmobilers and skiers

Livestock

Objectives in addition to Forestwide Objectives

Erect barriers to control user built trails in Lacey Creek Campground and restore conditions

Prepare a management plan for Crystal Park

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Moderate

Quartz Hill Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 3% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 2% Backcountry Recreation
- 95% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 97% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

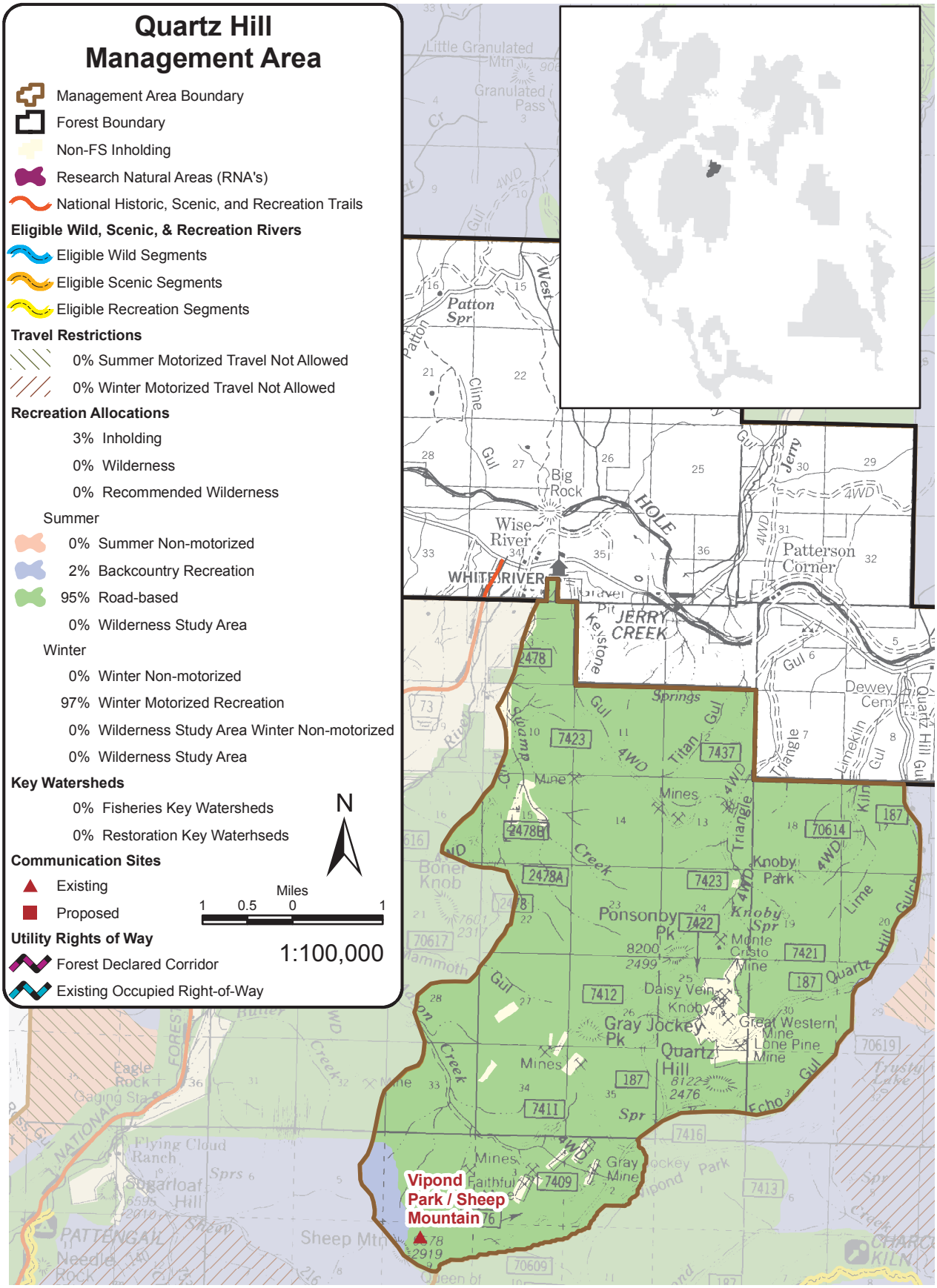
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:100,000



Quartz Hill Management Area

This area is managed for timber production, livestock grazing, and dispersed recreation.

The recreation setting is roaded, with a mix of modified and natural appearing scenery. Remnants of old mines are found throughout the landscape. Campers and hunters disperse themselves along and off of forest roads. Primitive roads form the backbone of motorized opportunities. The archery hunting season is very important here, along with the general big game season. Snowmobiling is common in winter.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle and mountain bike riders on roads and trails

Snowmobilers

Historic and active mining

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

Torrey Mountain Recommended Wilderness Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 100% Summer Motorized Travel Not Allowed
- 100% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Inholding
- 0% Wilderness
- 100% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 22% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

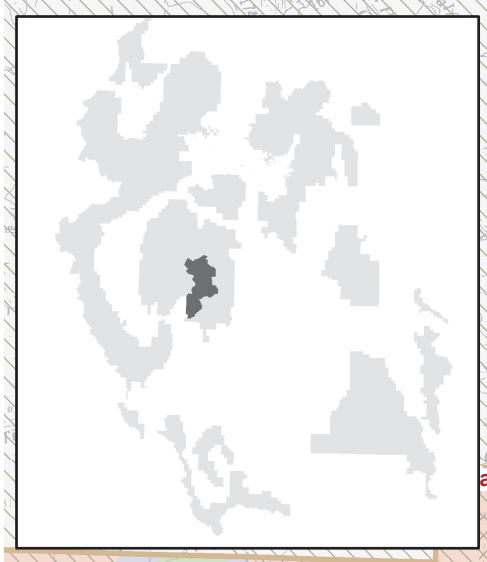
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

1 0.5 0 1

1:126,720



Pioneer Loop NRT
Wise River NRT
Vipond Park / Sheep Mountain
Elkhorn Lake RNA
Grasshopper Ridge NR
averick Mtn
Wise River NRT
Mule Creek
Tower Mtn
Deadhorse Repeater (Off NF)
Wise River NRT

Torrey Mountain Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and to provide non-motorized recreation with high levels of challenge and solitude

The recreation setting is semi-primitive non-motorized. Common recreation uses are day hikes, backpacking, or horseback trips of varied duration that originate from Birch Creek, Rock Creek , and other roads on the east side or trailheads on the Pioneer Mountains Scenic Byway on the west. Challenging backcountry skiing, snow shoeing, and hiking are available in winter.

Vegetation is managed primarily through prescribed and natural fire. Most active watershed restoration takes place in the lower reaches of Birch and Willow Creek watersheds, in the East Face management area.

Visitors may encounter

Native vegetation changes only from fire and other natural events

Livestock

Objectives in addition to Forestwide Objectives

Restore closed motorized trails to a more natural condition.

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Very High

Management of the area if released from wilderness designation

Semi-primitive non-motorized summer

Mixed semi-primitive motorized and non-motorized in winter as mapped in Alternative 1

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

West Face Management Area

- Management Area Boundary
- Forest Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 27% Summer Motorized Travel Not Allowed
- 31% Winter Motorized Travel Not Allowed

Recreation Allocations

2% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

27% Summer Non-motorized
40% Backcountry Recreation
31% Road-based
0% Wilderness Study Area

Winter

31% Winter Non-motorized
66% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area

Key Watersheds

16% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0 1

1:155,000

Pioneer Loop NRT

Wise River NRT

Skull-
Odell RNA

Deer
Camp Mtn

Maverick
Mtn

Elkhorn
Lake RNA

Mule
Creek

Deadhorse
Repeater
(Off NF)

Wise River NRT

Wise River NRT

West Face Management Area

This area is managed for a mix of forest uses including wood products, livestock grazing, and dispersed recreation.

Much of the recreation setting is semi-primitive except for past timber harvest around the road systems of Doolittle, Steel, and Bull creeks. Road access on the north end is limited because it includes a river crossing. Roads through the area provide access to the West Pioneer Wilderness Study Area. Common recreation activities are hunting, camping, hiking, horseback trail trips, and driving. Snowmobiling is popular through areas leading to the West Pioneers. Motorized closures in winter protect big game winter range.

Post and pole harvest, firewood gathering, and cattle grazing continue to be important uses, but the general character remains less developed as seen from the Big Hole Valley.

Doolittle and Squaw Creek are fisheries key watersheds managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicle riders on roads and trails

Snowmobilers

Hunting camps

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

West Pioneer Wilderness Study Area Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 68% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 0% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 0% Road-based
- 100% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 0% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 100% Wilderness Study Area

Key Watersheds

- 7% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 1 0.5 0 1

1:126,720

Pioneer NRT Loop

Skull-Odell RNA

Wise River NRT

Deer Deer Camp Mtn

Maverick Mtn

Grasshopper Ridge NR

West Pioneer Wilderness Study Area Management Area

This area is managed to protect Wilderness character, and to provide dispersed recreation and other forest activities consistent with the designation.

This Wilderness Study Area was designated, through the 1977 Montana Wilderness Study Act, P.L.95-150, for study of the area's potential for inclusion in the National Wilderness Preservation System. The study resulted in a non-wilderness recommendation in 1981 but the designation remains until Congress acts. .

The area provides a semi-primitive recreation setting in summer and winter. Hunting, stock and OHV use on trails are the most common activities. Popular snowmobile trails connect the Big Hole Valley through the Warm Springs area to the Scenic Byway.

Vegetation is managed primarily through prescribed and natural fire.

Doolittle and Squaw Creek are fisheries key watersheds managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from fire and other natural events

Livestock

Objectives in addition to Forestwide Objectives

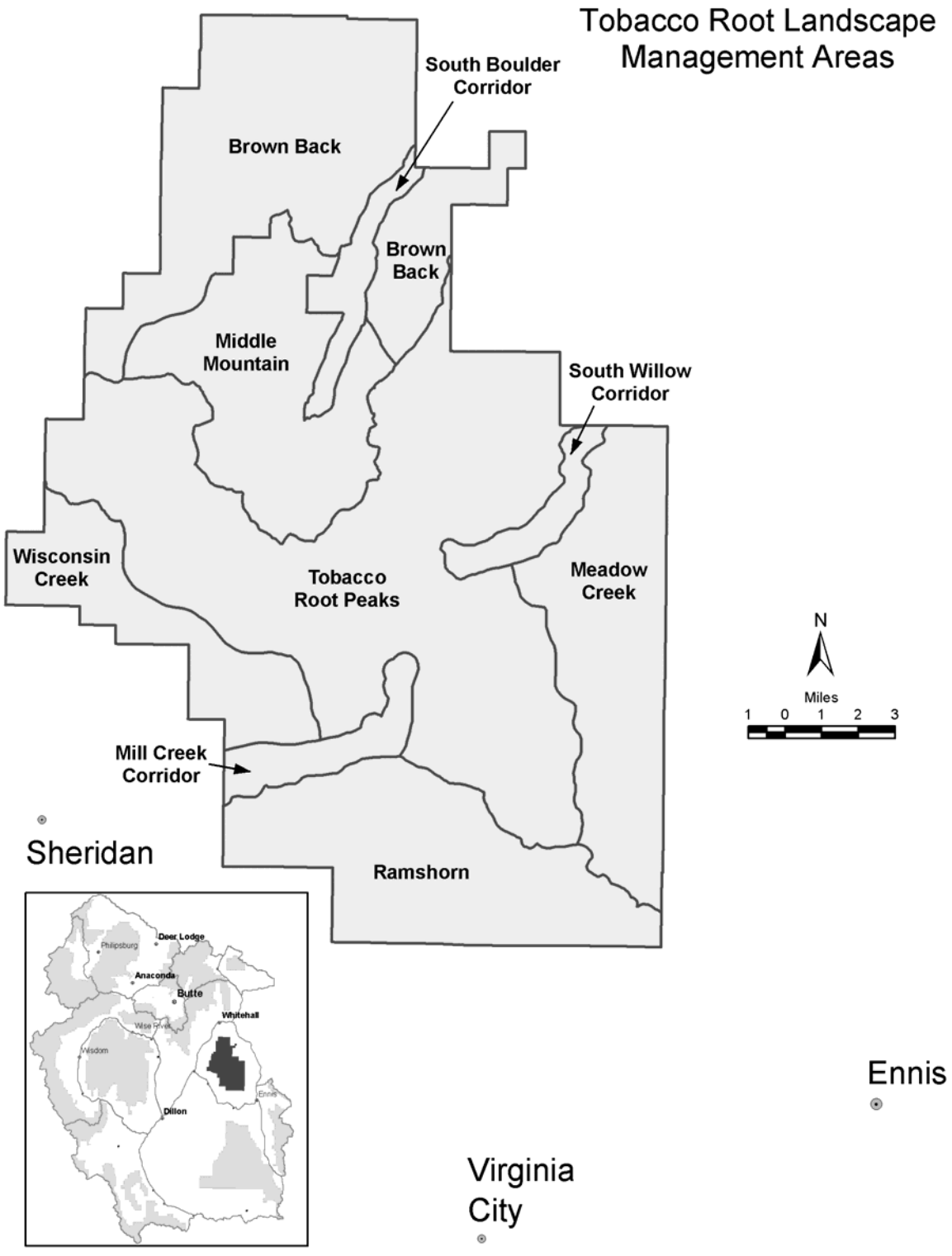
Restore areas altered by discontinued uses to a more natural condition

Standards in addition to Forestwide Standards

Manage according to the Montana Wilderness Study Act, P.L.95-150

Timber harvest is prohibited

Minimum Scenic Integrity Objective - High


Tobacco Root Landscape
Management Areas
South Boulder
Corridor
Brown Back
Brown
Back
Middle
Mountain
South Willow
Corridor
Wisconsin
Creek
Tobacco
Root Peaks
Meadow
Creek
N
Miles
1 0 1 2 3
Mill Creek
Corridor
Sheridan
Ramshorn
Deer Lodge
Philipsburg
Anaconda
Butte
Whitehall
Wise River
Wisdom
Ennis
Dillon
Ennis
Virginia
City

TOBACCO ROOT LANDSCAPE

The Tobacco Root Mountains are an island of high peaks, snowy basins, alpine lakes, accessible forested slopes and open rolling foothills. These mountains separate the rivers that form the Headwaters of the Missouri just miles away.

The complex geology of the Tobacco Root Mountains is dominated by granite and gneiss, is highly mineralized, and is favorable for metallic vein deposits. As a result of this same geology, most stream channels are well armored by rocks, steep gradient, and vegetation.

Vegetation is a mix of grasslands and conifer forests modified due to the discovery of gold in Alder Gulch in 1863 and fire suppression. Timber harvest related to early mining and the subsequent population boom affected most forest stands in the Tobacco Root Mountains. Forested stands occupy more foothill sites at lower elevations than they have in many decades. Dry rocky slopes on the northwest end support mountain mahogany, a unique habitat on this forest. The largest number of mountain goats in any southwest Montana mountain range inhabits the higher elevations.

In spite of steep terrain, signs of ambitious gold miners from as long ago as the 1860's and as recently as this decade are found in roads, trails, cabins and adits scattered throughout the range. Some sites may be historically significant and eligible for listing as historic places. Many mining claims were patented, resulting in scattered private in-holdings throughout the mountain range. Some claims are being sold as summer home property.

The south half of Tobacco Root Landscape lies within the Greater Yellowstone Ecosystem. Even so, the landscape is far enough from Yellowstone Park to be outside its sphere of influence on tourism or wildlife movement.

The Tobacco Roots serve as the back yard for communities like Bozeman, Sheridan, Ennis, McAllister, Pony, and Mammoth. Local use is common and demand for activities like firewood cutting, dispersed camping, and a variety of trail opportunities is high. Alpine lakes attract both motorized and non-motorized recreationists. Campers find dispersed sites along streams and at trailheads and developed campgrounds. In spite of terrain, the Tobacco Roots are well served by roads, many of dating back to historic mining. In winter snow depths and plowed road access to snow often limit snowmobile and cross-country ski opportunities.

Brown Back Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 2% Summer Motorized Travel Not Allowed
- 84% Winter Motorized Travel Not Allowed

Recreation Allocations

14% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

2% Summer Non-motorized
48% Backcountry Recreation
37% Road-based
0% Wilderness Study Area

Winter

84% Winter Non-motorized
2% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

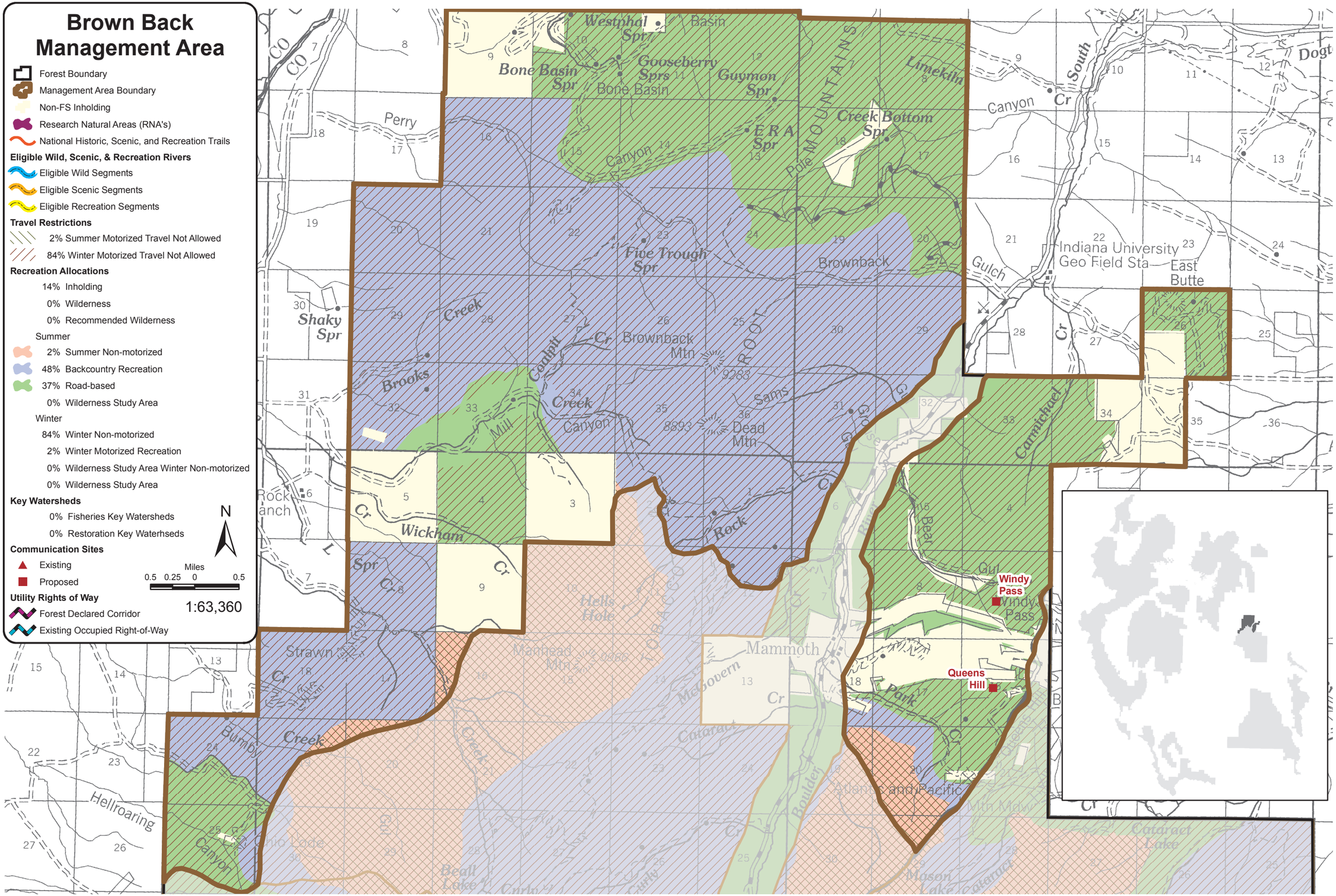
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Miles
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Brown Back Management Area

This area is managed for dispersed recreation, wintering wildlife, and livestock grazing.

The recreation setting is semi-primitive and roaded with low density summer motorized access in a mostly natural appearing area. Access to the area is limited by the terrain. Visitors are mostly local and regional residents. Recreation use occurs mostly in hunting season and is related to roads and trails. Brown Back is non-motorized in winter for wildlife security and occasional non-motorized recreation.

Historic mining has less influence here than in the rest of the mountain range. Some interior homesteads and patented claims are being sold as recreational properties.

Visitors may encounter

Changes in the vegetation from timber harvest or fire

Motor vehicle riders on roads and trails in summer

Hikers or skiers on trails in winter

Livestock

Objectives in addition to Forestwide Objectives

Improve road access to the management area, and the quality of road and trails by designating routes and connecting access points

Standards in addition to Forestwide Standards

None

Meadow Creek Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 1% Summer Motorized Travel Not Allowed
- 36% Winter Motorized Travel Not Allowed

Recreation Allocations

4% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

- 1% Summer Non-motorized
- 23% Backcountry Recreation
- 72% Road-based
- 0% Wilderness Study Area

Winter

- 36% Winter Non-motorized
- 60% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

0% Fisheries Key Watersheds
16% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Albro Lake
Lower Twin Sno-tel
Ramshorn

Meadow Creek Management Area

This area is managed for timber production and a variety of recreation uses.

Recreation takes place in a mix of roaded and semi-primitive settings with altered and natural appearing scenery. Evidence of historic mining is scattered throughout the area. Signs of timber harvest related to gold mining have blended into the landscape but some more recent harvest units are visible. The Meadow Creek area is easily seen from the Highway 287.

Dispersed camping, hiking and fishing, ATV travel on primitive roads, and snowmobiling in winter are common activities. The few non-motorized trails are popular in summer and fall. Recreation use is fairly heavy in all seasons, especially on weekends. Meadow Creek serves as the backyard to several subdivisions (Elk Hills, Shining Mountains North, and Washington Bar) where homes are scattered through the sagebrush/juniper hills. The area is close to McAllister and Ennis and receives day use from both communities as well as Bozeman/Gallatin County area yearlong. The area north of Sureshot Lakes is closed to motorized use in winter to provide opportunities for skiing accessible from South Willow Creek and to provide wildlife security.

Active watershed restoration may take place in parts of this management area within the South Willow Creek watershed.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicles on roads and trails in summer and winter

Remnants of historic mining and current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

Provide separate loop opportunities for motorized and non-motorized use

Reduce risk of fire near private lands in mixed ownership areas and subdivisions through vegetation treatments

Standards in addition to Forestwide Standards

None

Middle Mountain Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 61% Summer Motorized Travel Not Allowed
- 91% Winter Motorized Travel Not Allowed

Recreation Allocations

- 5% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 61% Summer Non-motorized
- 31% Backcountry Recreation
- 3% Road-based
- 0% Wilderness Study Area

Winter

- 91% Winter Non-motorized
- 4% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

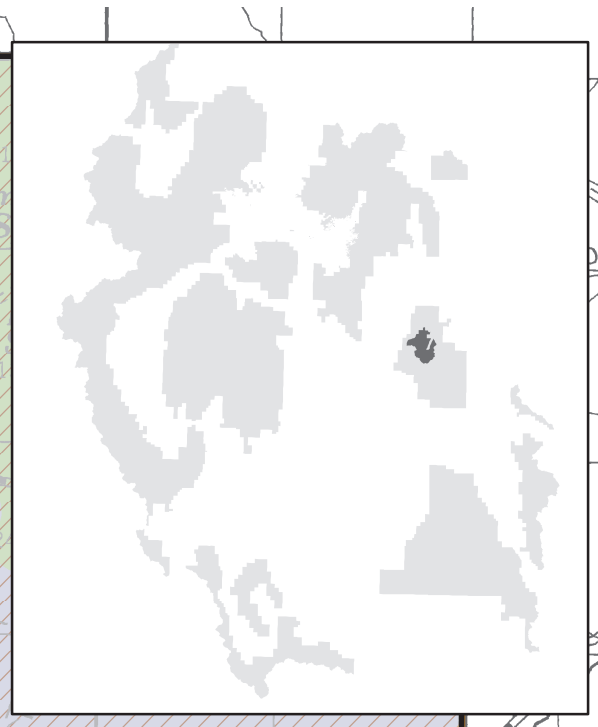
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 0.5 0.25 0 0.5

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Westphal Basin
Westphal Spr
Bone Basin Spr
Gooseberry Sprs
Bone Basin
Canyon
Five Trough Spr
Brownback Mtn
Coalpit Cr
Mill Creek
Dead Mtn
Hells Hole
Manhead Mtn 9966
Kobau Trail
Mammoth
Windy Pass
Atlantic and Pacific
Mason Lake
Upper Mason Lake
Hollow Top Mtn
Skytop Lake
Deep Lake
Mt Jefferson
Albro Lake
Potosi Pk
Nicholson
Ohio Lode
Beall Lake
Curly Lake
Curly Cr
Westphal Parks
Brannan Lakes
Globe Lake
Lower Boulder Lake
Lakeshore Mtn
Mt Jackson
Jackson Lake
Crystal Lake
Twin Lakes
Bismark Res
Louise Lake
Middle Mtn
Little Granite Pk
Granite Pk
Lost Cabin Lake
Sunrise Lake
Sunrise Pk
Spuhler Pk
Noble Lake
Old Baldy Mtn
Lava Mtn
Grouse
Pete and Joe
Giant
B and H
APA Mtn
Smelter Mtn
Lost Lake NRT
Loise Lake NRT
South Kobau Trail
Kobau Trail
4WD

Middle Mountain Management Area

This area is managed to protect roadless characteristics, provide dispersed recreation opportunities, and provide secure wildlife habitat.

Recreation takes place in a semi-primitive setting. This is one of the few places in the Tobacco Roots where recreationists can find a quiet non-motorized backcountry experience in summer and fall. The entire area is non-motorized in winter to provide high elevation winter wildlife security and habitat for mountain goats and other species, and to provide opportunities for skiing or snowshoeing.

Historic mining cabins, adits, and stamp mills are scattered throughout the area. Gold seekers still show occasional interest in both patented and unpatented claims in this highly mineralized area. The Nicholsen Mine, for example, is occasionally actively mined on the west face of Horse Mountain.

Other land uses include livestock grazing.

Visitors may encounter

Vegetation changes from wind, fire, insects, and water events

Visitors on trails at different times of the year on foot, horseback, or bicycles

Motor vehicles on roads and some trails in summer

Remnants of historic mining and current mining activity or reclamation

Livestock

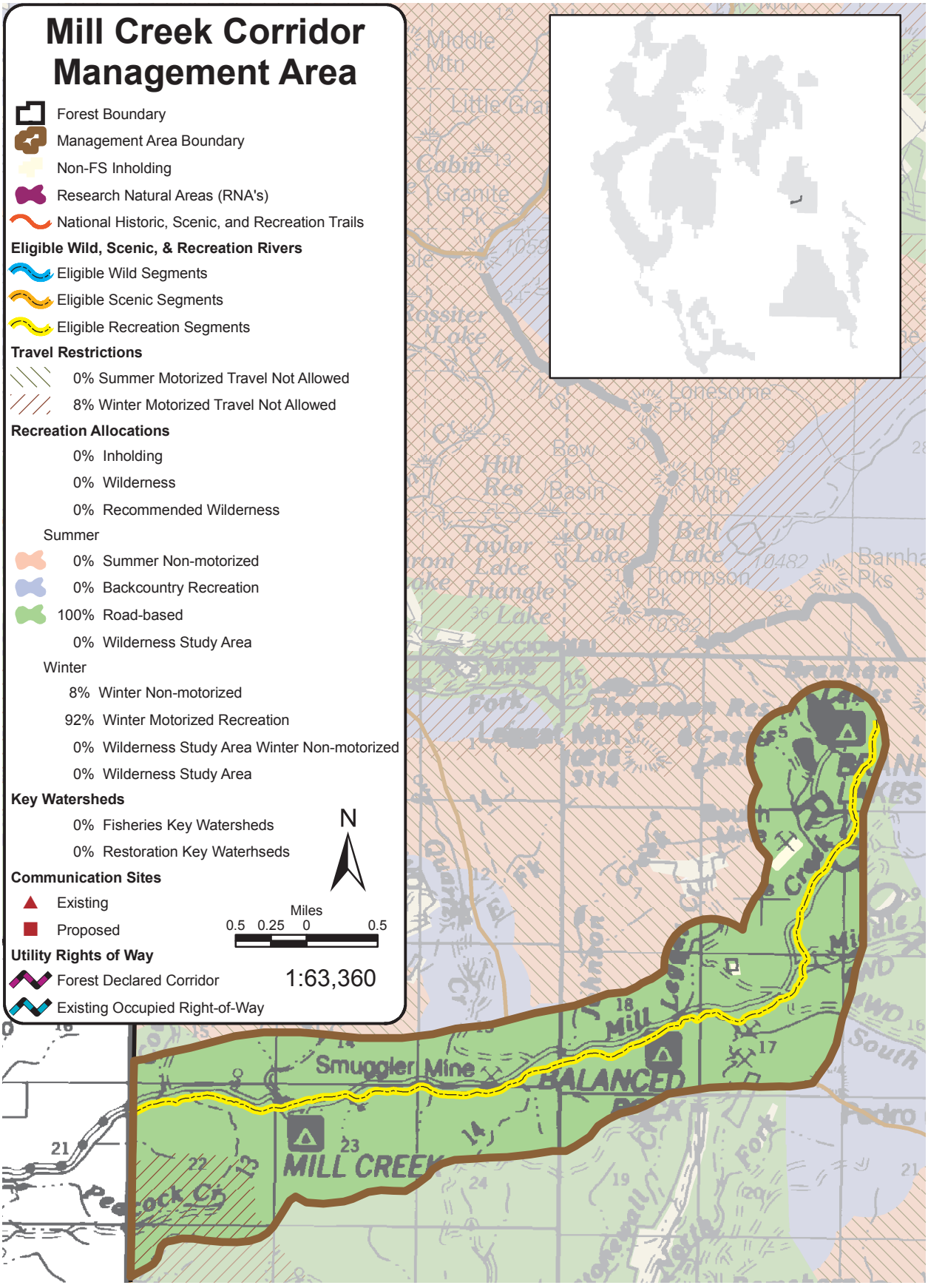
Objectives in addition to Forestwide Objectives

Maintain or enhance roadless characteristics and naturalness

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

No expansion of motorized opportunities


Mill Creek Corridor Management Area
Forest Boundary
Management Area Boundary
Non-FS Inholding
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
8% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
100% Road-based
0% Wilderness Study Area
Winter
8% Winter Non-motorized
92% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
0.5 0.25 0 0.5
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Smuggler Mine
MILL CREEK
BALANCED
Mill
Middle Mtn
Little Granite Pk
Cabin
Granite Pk
Hossiter Lake
Hill Res
Basin
Long Mtn
Lonesome Pk
Oval Lake
Bell Lake
Thompson Pk
Taylor Lake
Triangle Lake
Fork
Peacock Cr
South

Mill Creek Corridor Management Area

This area is a travel corridor managed for developed and dispersed camping opportunities and motorized uses.

The recreation setting is mostly roaded and natural appearing with areas of concentrated recreation developments. Evidence of historic mining is common, as is current activity. The corridor's proximity to Sheridan makes it a backyard for the community. Scenery is important to users of the Mill Creek Road. Development of private in-holdings and patented claims in Mill Creek affects the view and setting Developed recreation sites are available at Mill Creek, Balanced Rock, and Branham Lakes. The day use areas are frequently full in summer and campgrounds receive heavy use in summer and fall hunting season. The corridor provides access to non-motorized areas in the Tobacco Root Peaks. In winter, both snowmobiles and skiers can recreate in Mill Creek corridor.

Visitors may encounter

Vegetation changes from timber harvest or fire

Dispersed campsites and campgrounds

Motor vehicles on roads in spring, summer, and fall

Snowmobiles and skiers on the road corridor in winter

Remnants of historic mining and current mining activity or reclamation

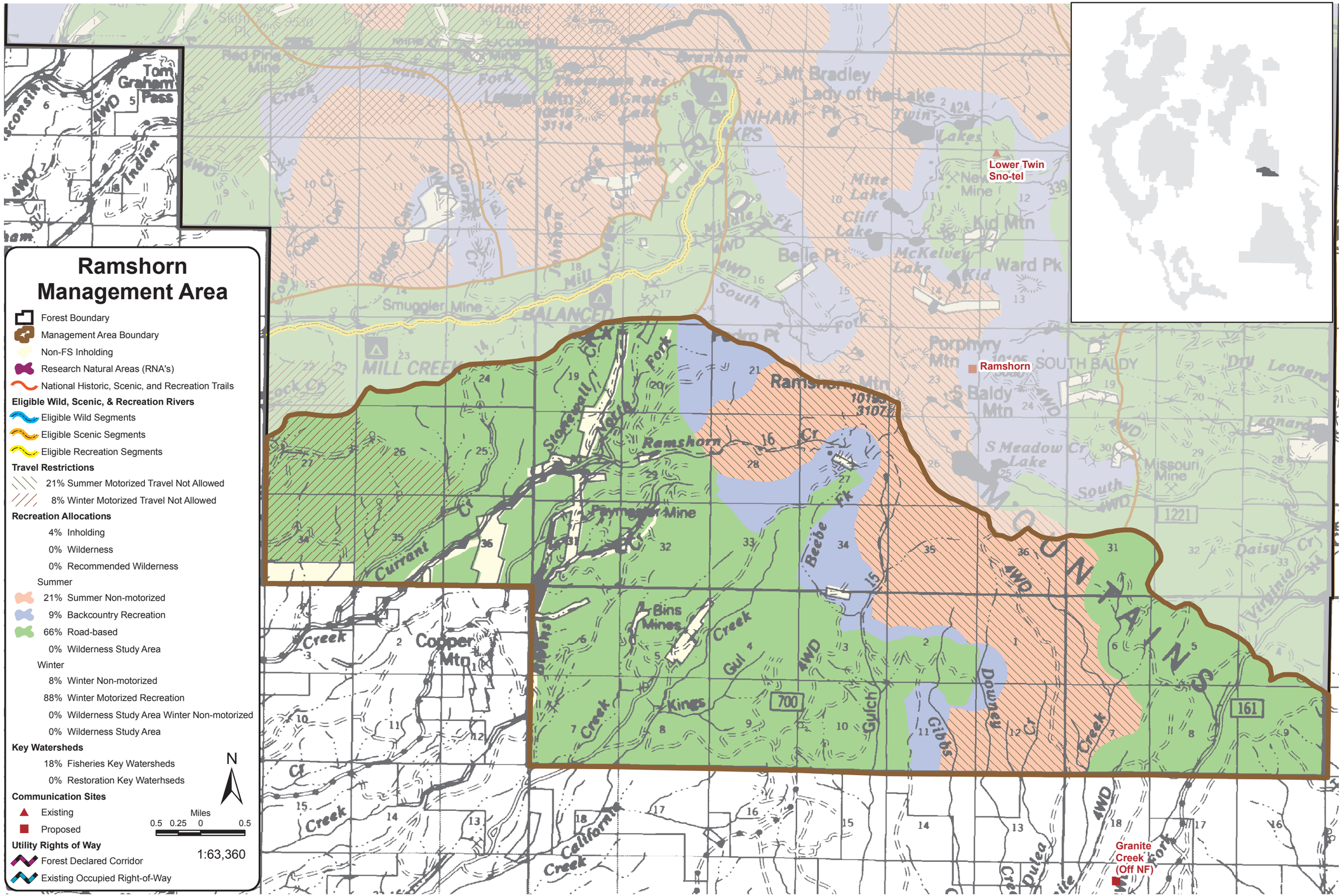
Livestock

Objectives in addition to Forestwide Objectives

Maintain the designated snowmobile route on Mill Creek Road

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High


Ramshorn Management Area
Forest Boundary
Management Area Boundary
Non-FS Inholding
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
21% Summer Motorized Travel Not Allowed
8% Winter Motorized Travel Not Allowed
Recreation Allocations
4% Inholding
0% Wilderness
0% Recommended Wilderness
Summer
21% Summer Non-motorized
9% Backcountry Recreation
66% Road-based
0% Wilderness Study Area
Winter
8% Winter Non-motorized
88% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
18% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
0.5 0.25 0 0.5
1:63,360
Lower Twin Sno-tel
Ramshorn
Granite Creek (Off NF)
Ramshorn
Mt Bradley
Lady of the Lake Pk
Kid Mtn
Ward Pk
Belle Pt
McKelvey Lake
Porphyry Mtn
S Baldy Mtn
SOUTH BALDY
S Meadow Lake
Missouri Mine
Smuggler Mine
MILL CREEK
Stonewall Mtn
Ramshorn
Plymouth Mine
Bins Mines
Copper Mtn
Kings
Gibbs
Downey
Daisy
Virginia
Currant
California
Dulea
BITTERROOT MOUNTAINS
700
161
1221

Ramshorn Management Area

This area is managed for timber production, road-based recreation, and other forest uses and values.

The recreation setting is roaded in the lower elevations and semi-primitive non-motorized in the higher elevations along the crest of the Tobacco Roots. Recreation use is light, and limited to activities like firewood cutting, hunting, and recreational driving. Visitors are mostly local and regional residents. Lower elevations are relatively snow free in winters, and provide non-snow opportunities much of the year.

There are a number of subdivisions located in the dry foothills below the forest boundary.

A snowmobile closure protects big game winter range in the Horse Creek – Currant Creek foothills.

California Creek is a fisheries key watershed.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicles on roads and trails in summer, fall, and winter

Dispersed campsites along forest roads in summer and fall

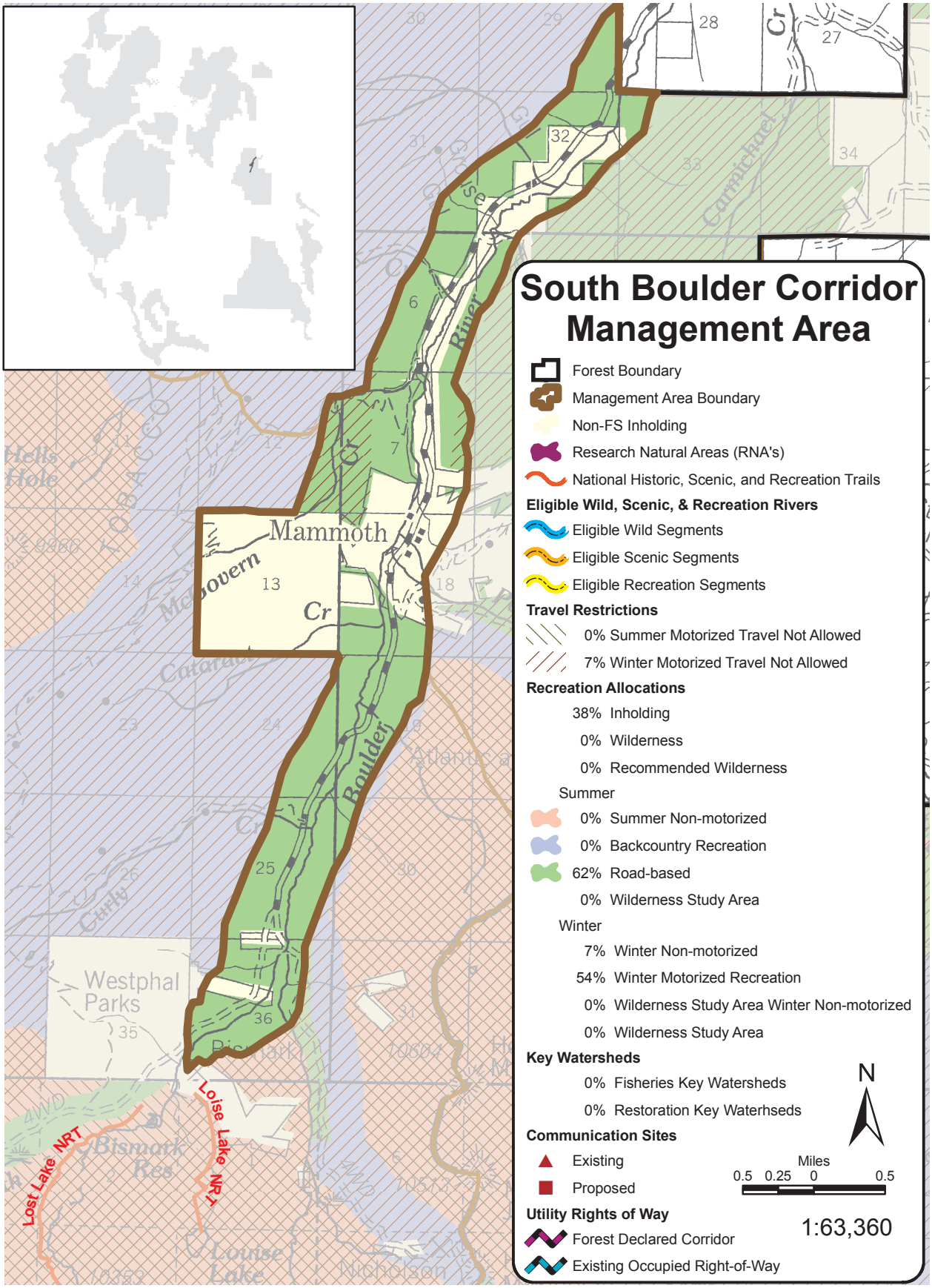
Livestock

Objectives in addition to Forestwide Objectives

Retain and improve access to roadside dispersed camping sites

Standards in addition to Forestwide Standards

None


South Boulder Corridor Management Area
Forest Boundary
Management Area Boundary
Non-FS Inholding
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
0% Summer Motorized Travel Not Allowed
7% Winter Motorized Travel Not Allowed
Recreation Allocations
38% Inholding
0% Wilderness
0% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
62% Road-based
0% Wilderness Study Area
Winter
7% Winter Non-motorized
54% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
0.5 0.25 0 0.5
1:63,360
Mammoth
Westphal Parks
Bismark Res
Louise Lake
Lost Lake NRT
Loise Lake NRT
Boulder River
Carmichael Cr
Curly Cr
Hells Hole

South Boulder Corridor Management Area

This area is managed for concentrated recreation use and road access through National Forest.

The recreation setting is mostly roaded with concentrated areas of dispersed recreation. South Boulder serves as a travel corridor providing stunning views of the Tobacco Root peaks and as a destination for residents from Mammoth, Cardwell, Whitehall, Bozeman, and beyond. Recreation activities include driving, camping, horseback riding, hunting, and fishing in high mountain lakes and streams accessible from the corridor. Dispersed camping and trail access to non-motorized opportunities in Middle Mountain are available.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer and winter

Dispersed campsites along forest roads

Developed trailheads for access into the high country

Livestock

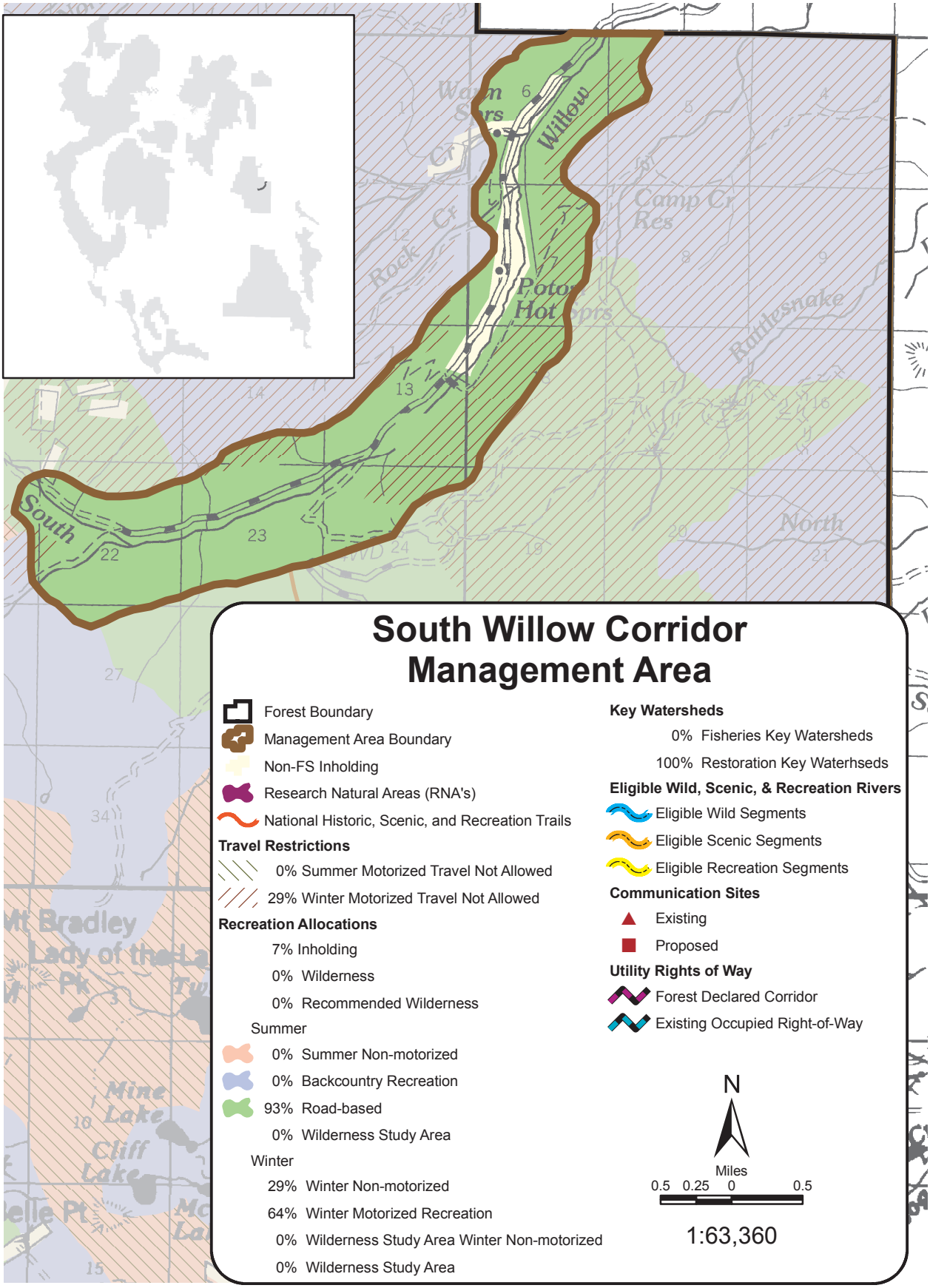
Objectives in addition to Forestwide Objectives

Designate dispersed sites and where necessary, harden and provide sanitation to minimize soil and water impacts

Reduce risk of wildfire near Mammoth through vegetation treatment

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High



South Willow Corridor Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 29% Winter Motorized Travel Not Allowed

Recreation Allocations

- 7% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 93% Road-based
- 0% Wilderness Study Area

Winter

- 29% Winter Non-motorized
- 64% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 100% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

0.5 0.25 0 0.5

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South Willow Corridor Management Area

This area is managed for concentrated recreation and road access through National Forest.

The recreation setting is a mix of roaded and semi-primitive settings with concentrated areas of recreation development. The South Willow Corridor serves as both a travel corridor and a destination for visitors from Pony, Harrison, Bozeman and more distant areas. Views of the mountain peaks at the head of South Willow Creek from many points on the corridor and trails are stunning. Potosi Campground and other dispersed sites provide visitors the opportunity to camp and ride trail vehicles. Snowmobilers ride up the corridor to areas further up the drainage. The Camp and Rock creek areas are closed to snowmobiles to create ski and snowshoe opportunities from the end of the plowed road.

There are various homes and structures on private in-holdings around Potosi. The Bungalow Group is an authorized recreation residence tract.

Active watershed restoration may take place in this portion of South Willow Creek

Visitors may encounter

Vegetation changes from timber harvest or fire

Dispersed camping along forest roads

Motor vehicles on roads in spring, summer, and fall

Snowmobilers and skiers on routes and trails in winter

Livestock

Objectives in addition to Forestwide Objectives

Develop access and parking to support winter recreation opportunities

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - High

Tobacco Root Peaks Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 38% Summer Motorized Travel Not Allowed
- 45% Winter Motorized Travel Not Allowed

Recreation Allocations

- 6% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 38% Summer Non-motorized
- 35% Backcountry Recreation
- 21% Road-based
- 0% Wilderness Study Area

Winter

- 45% Winter Non-motorized
- 49% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 9% Fisheries Key Watersheds
- 23% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

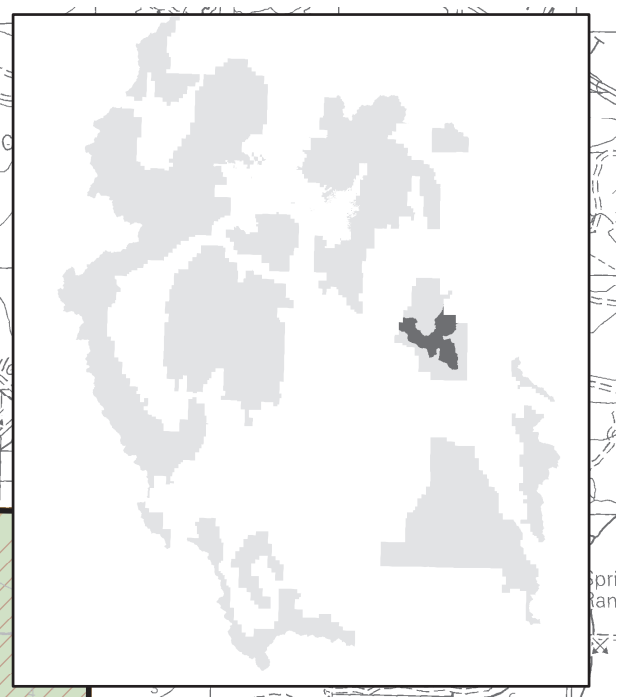
- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Windy Pass

Queens Hill

Lost Lake NRT

Loise Lake NRT

Albro Lake

Lower Twin Sno-tel

Ramshorn

South Baldy

Tobacco Root Peaks Management Area

This area is managed for dispersed recreation and secure high elevation wildlife habitat.

The recreation setting is semi-primitive with natural appearing scenery. Traces of current and historic mining are common on patented ground and mining claims. Opportunities are provided for motorized access to some mountain lakes and alpine areas, while others are accessible only by foot, horse, or mountain bike. Both motorized and non-motorized winter recreation is also well established in some of the high basins and slopes. Motorized closures in selected high elevations habitat provide wildlife security, primarily for mountain goats and remote backcountry winter recreation opportunities.

Because of inholdings and proximity to the forest boundary, the setting in some areas is roaded. Past mining activity and private development alters some locations even more.

Watershed restoration activities, including vegetation management, may take place in the South Willow Creek watershed. Indian Creek is a fisheries key watershed.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and open motorized trails in summer and fall

Hikers, skiers, or horseback riders on trails

Remnants of historic mining and current mining activity or reclamation

Livestock at lower elevations

Objectives in addition to Forestwide Objectives

Retain opportunities for challenging full size four-wheel driving while mitigating impacts to soil and water

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective - Very High

Wisconsin Creek Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 35% Summer Motorized Travel Not Allowed
- 16% Winter Motorized Travel Not Allowed

Recreation Allocations

6% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

- 35% Summer Non-motorized
- 18% Backcountry Recreation
- 40% Road-based
- 0% Wilderness Study Area

Winter

16% Winter Non-motorized
78% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area

Key Watersheds

16% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
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Wisconsin Creek Management Area

This area is managed for dispersed recreation and other resource uses.

The recreation setting is roaded and semi-primitive with mostly natural appearing scenery. Evidence of historic mining is common, as is current activity. Recreation use tied to the roads and trails in various drainages which provide routes to the high alpine lakes of the Tobacco Root Peaks Management Area. Visitors are often just passing through to other destinations, except in winter and early spring. During those seasons recreationists use the area because it is relatively snow free and accessible. The area south of Wisconsin Creek is closed to motorized use in winter to provide opportunities for non-motorized recreation and compliment secure blocks of high elevation winter wildlife habitat connecting to the Tobacco Root Peaks.

Indian Creek is a fisheries key watershed.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer, fall, and winter

Livestock

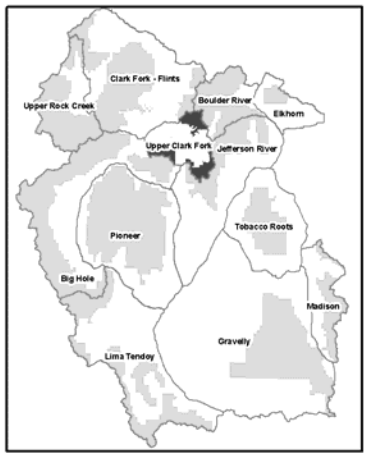
Objectives in addition to Forestwide Objectives

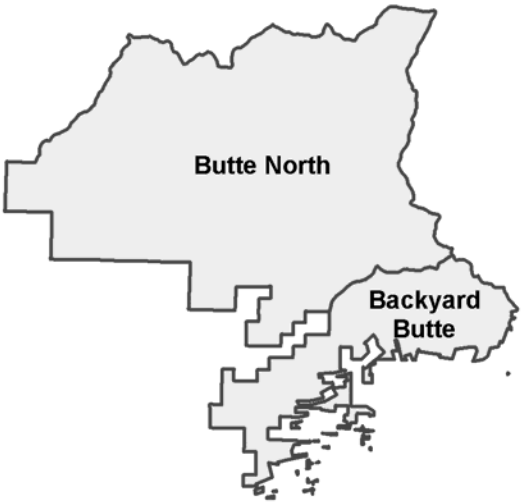
Retain opportunities for full sized four-wheel drive vehicles while mitigating impacts to soil and water

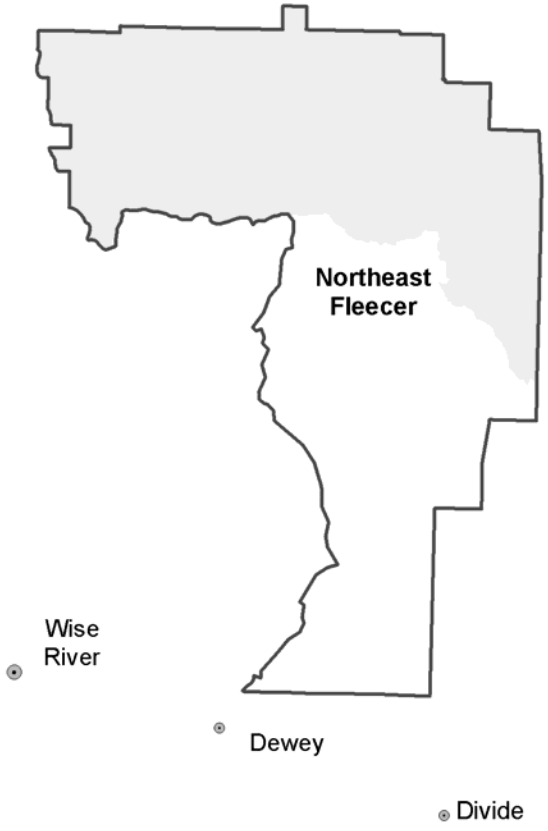
Standards in addition to Forestwide Standards

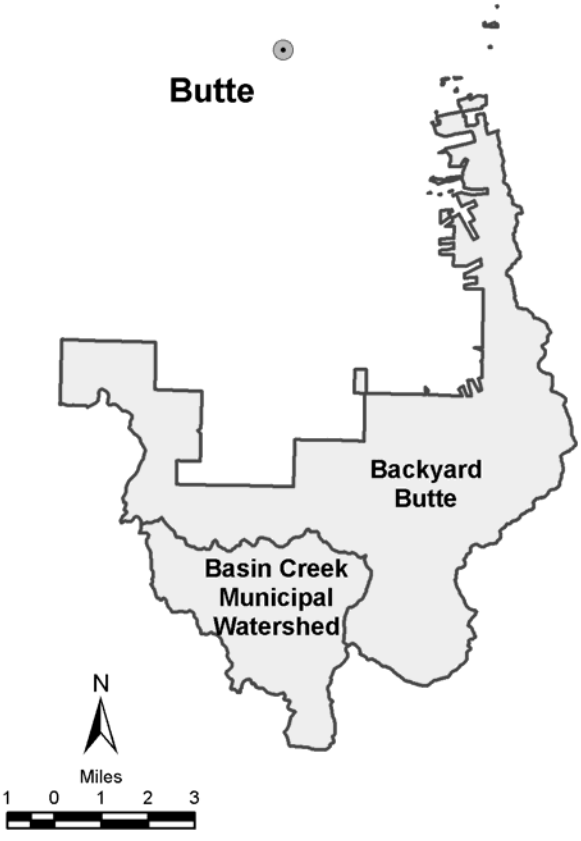
None

Upper Clark Fork Landscape Management Areas









UPPER CLARK FORK LANDSCAPE

The Upper Clark Fork is one of three landscapes located on the Pacific side of the Continental Divide. Vegetation is dominated by lodgepole pine forests. The headwaters of the Clark Fork River, a tributary of the Columbia River, originate in the forested highlands surrounding Butte. Mountain goats live in the Highland Mountains. Elk in addition to moose, and other wildlife are also found in the area.. Many of the streams contain bull trout and westslope cutthroat trout.

The Upper Clark Fork Basin contains the Butte urban area and the forest is its playground. Land ownership is mixed along the forest fringe. This provides particular management challenges, with private homes and patented mining claims mixed in with forested vegetation and various access needs. The city and county administrators of Butte-Silver Bow take great interest in forest management because of the traditional interdependence between the community and surrounding lands.

Mining was the reason for settlement of this area. Remnants of the mining culture provide historic features which visually dominate some valley and hillsides. Streams, soils, vegetation, and landform have been altered by mining. Nearly all present conifer stands are regenerated clear-cuts from over a century ago. Some forested areas have been logged a second time. Mining and timber harvest continue within the landscape, but their contribution to the local economy has declined.

The Forest contributes to the scenic backdrop around Butte. The landscape is the smallest on the forest, yet the level of development and recreation use is high. Recreation tends toward day use gatherings, picnicking, and trail outings.

Backyard Butte Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 34% Summer Motorized Travel Not Allowed
- 55% Winter Motorized Travel Not Allowed

Recreation Allocations

- 9% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 34% Summer Non-motorized
- 2% Backcountry Recreation
- 55% Road-based
- 0% Wilderness Study Area

Winter

- 55% Winter Non-motorized
- 36% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 58% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

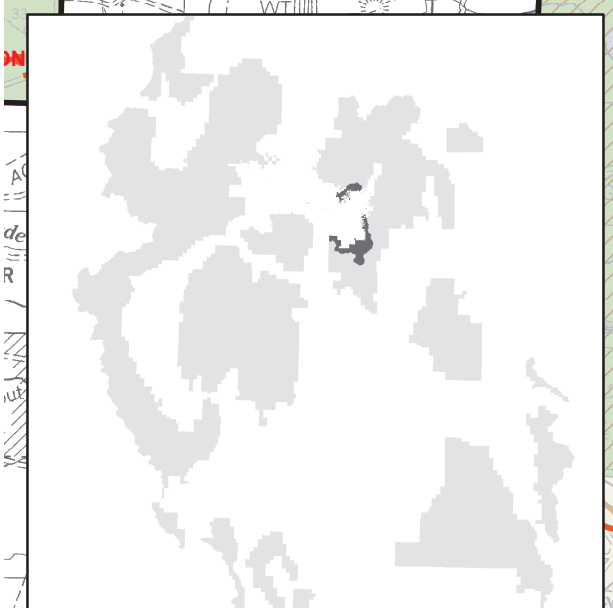
- Forest Declared Corridor
- Existing Occupied Right-of-Way

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CDNST

Moulton Res No 1

Basin Creek RNA

Donald R Site

Backyard Butte Management Area

This area is managed for concentrated recreation and other resource uses.

The recreation settings include rural, roaded, and semi-primitive areas. Areas of private land are intermixed with Forest lands. A mix of motorized and non-motorized recreation opportunities are optimized for local citizens year around. Thompson Park, along the Continental Divide, and Old Milwaukee Rails to Trails are non-motorized routes and the Moulton Cross-Country Ski Trails are groomed by the local club. The East Ridge serves as a scenic backdrop for the city and scenic base for the Lady of the Rockies, located on private land.

The mix of ownership leads to local concern about fuels buildup around homes and in municipal watersheds. Responsibility for managing the municipal water supply and the Thompson Park Municipal Recreation Area is shared with Butte-Silver Bow Consolidated City-County Government (BSCCCG). Recreation residence tracts are authorized here.

Winter non-motorized allocations provide wildlife security above the East Ridge. South of Butte, the allocation provides wildlife security as well as a place for quiet recreation accessible from town.

Vegetation is managed to provide wood products, reduce fuels, and produce forage for livestock and wildlife. Blacktail and Columbia Gulch are fisheries key watersheds, managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Hikers, picnickers and skiers concentrated in developed areas and on trails

Motor vehicles on roads and trails

Remnants of historic mining and current mining activity or reclamation

Livestock

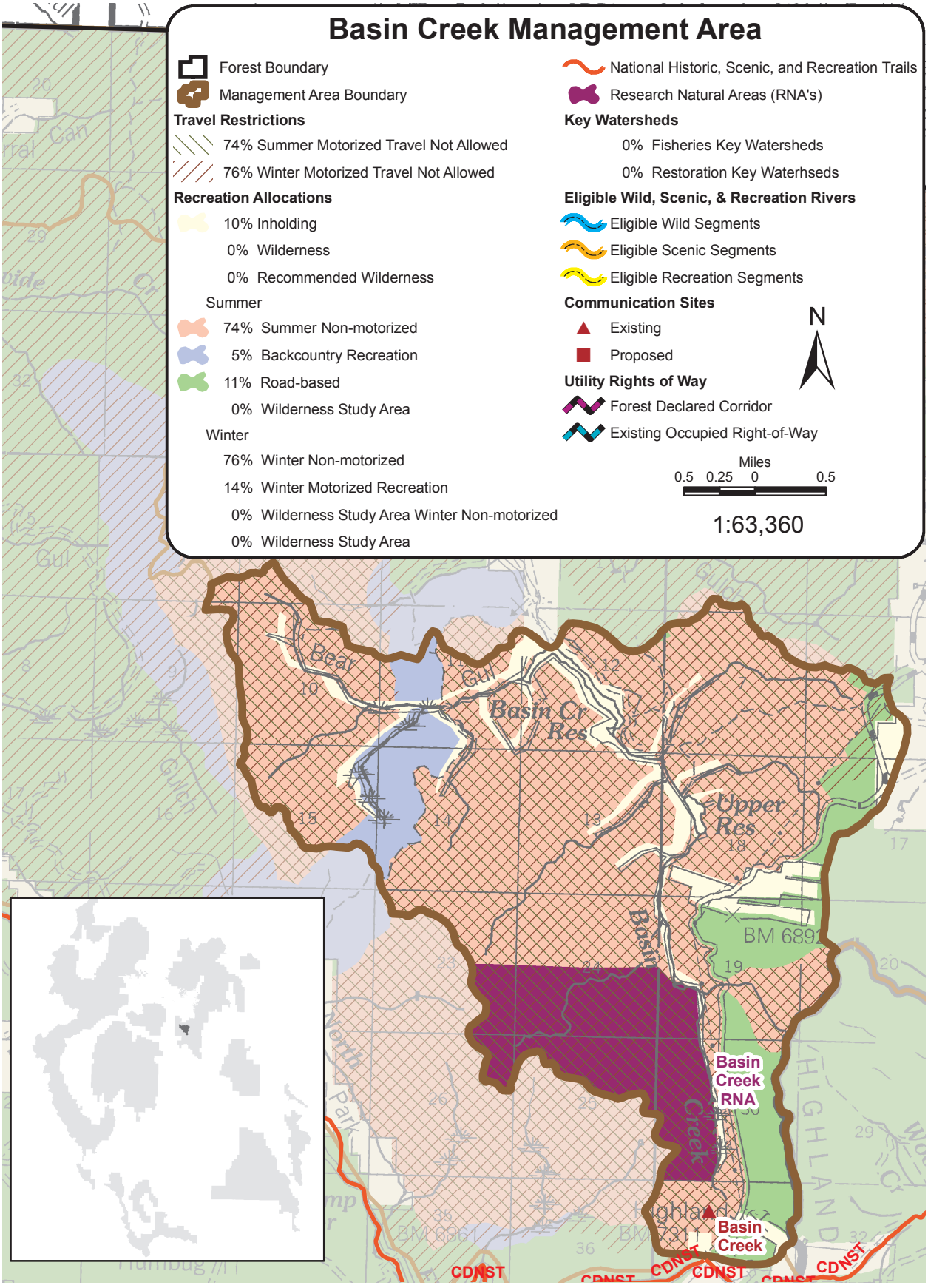
Objectives in addition to Forestwide Objectives

Develop a master plan for Thompson Park in cooperation with BSCCCG to ensure community needs are met in addition to federal regulations for NFS management

Reduce risk of wildfire to private property by managing vegetation and fuel loads in wildland urban interface

Standards in addition to Forestwide Standards

None


Basin Creek Management Area
Forest Boundary
Management Area Boundary
Travel Restrictions
74% Summer Motorized Travel Not Allowed
76% Winter Motorized Travel Not Allowed
Recreation Allocations
10% Inholding
0% Wilderness
0% Recommended Wilderness
Summer
74% Summer Non-motorized
5% Backcountry Recreation
11% Road-based
0% Wilderness Study Area
Winter
76% Winter Non-motorized
14% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
National Historic, Scenic, and Recreation Trails
Research Natural Areas (RNA's)
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
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Miles
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Bear
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Upper Res
BM 6891
Basin Creek RNA
Basin Creek
CDNST
CDNST
CDNST
CDNST

Basin Creek Management Area

This area is managed to protect water quality within a designated Class A watershed. Entry into a portion of the area is prohibited yearlong by a closure order for the protection of public health and safety.

The setting is a mix of roaded and semi-primitive; however, recreation use is not encouraged. Exceptions are the Highland (Moose Creek) Road which traverses the east side, Trail #108 on the west side, and the CDNST along the upper boundary.

Winter non-motorized allocations provide wildlife security and protect water quality.

Activities above the Basin Creek Dam are restricted to those which contribute to watershed protection.

Visitors may encounter

Vegetation changes from timber harvest or fire

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Livestock grazing is not allowed

New permanent roads or trails are not allowed

Butte North Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 0% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 18% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 0% Summer Non-motorized
- 0% Backcountry Recreation
- 82% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 82% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 28% Fisheries Key Watersheds
- 2% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

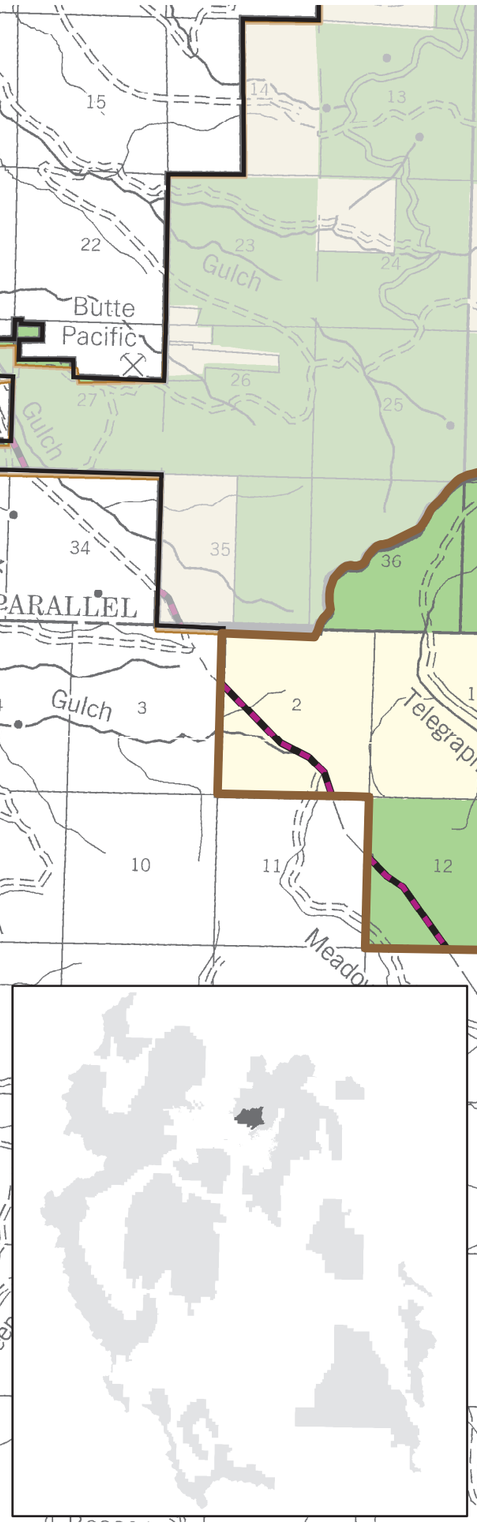
Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

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Butte North Management Area

This area is managed for timber harvest, livestock grazing and dispersed recreation.

Recreation takes place in a roaded setting with a mix of modified and natural appearing scenery. Recreation opportunities are dispersed and motorized. Most of the recreation use is motorized. Snowmobile use in winter is common. One route is groomed. The area is important to local residents for fall hunting. Along with the neighboring management areas it is considered a part of Butte's backyard.

Columbia Gulch is a fisheries key watershed managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on designated roads and trails year-round

Livestock

Objectives in addition to Forestwide Objectives

Segregate opportunities for full size highway vehicles and ATVs

Convert some roads to trails

Reduce risk of wildfire to private property by managing vegetation and fuel loads in wildland urban interface

Standards in addition to Forestwide Standards

None

Northeast Fleecer Management Area

Forest Boundary

Management Area Boundary

Travel Restrictions

0% Summer Motorized Travel Not Allowed

21% Winter Motorized Travel Not Allowed

Recreation Allocations

5% Non-FS Inholding

0% Wilderness

0% Recommended Wilderness

Summer

0% Summer Non-motorized

39% Backcountry Recreation

56% Road-based

0% Wilderness Study Area

Winter

21% Winter Non-motorized

74% Winter Motorized Recreation

0% Wilderness Study Area Winter Non-motorized

0% Wilderness Study Area

Research Natural Areas (RNA's)

National Historic, Scenic, and Recreation Trails

Key Watersheds

42% Fisheries Key Watersheds

0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

Eligible Wild Segments

Eligible Scenic Segments

Eligible Recreation Segments

Communication Sites

Existing

Proposed

Utility Rights of Way

Forest Declared Corridor

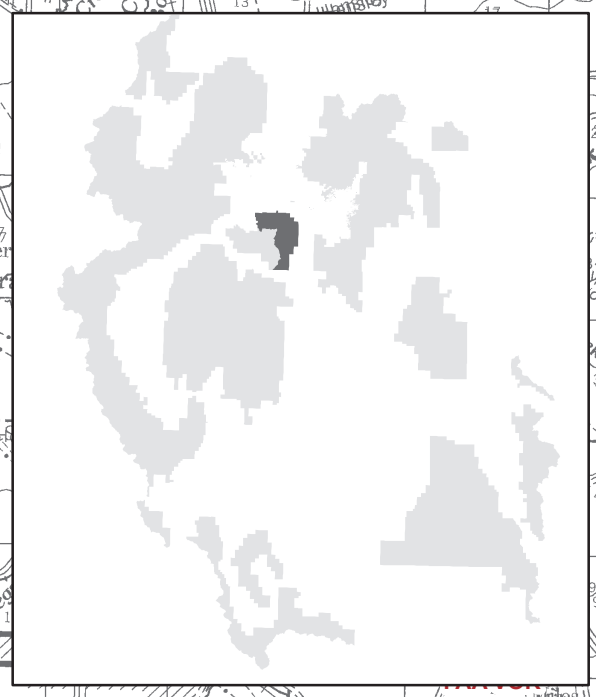
Existing Occupied Right-of-Way

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Big Hole Landscape

Upper Clark Fork Landscape

Big Hole Landscape

Upper Clark Fork Landscape

CDNST

Beals Hill

Bean Ridge Repeater

Granulated Mountain

Lobo Mesa

(Off NF)

Wise River NRT

Northeast Fleecer Management Area

This area is managed for dispersed recreation; secure fall and winter wildlife habitat, and other resource uses.

The recreation setting is a mix of roaded and semi-primitive with a few exceptions to the natural appearing scenery, including Beal Mine. Proximity to Butte and Anaconda make this area attractive for a day of challenging motorized trail riding in summer and winter. Motorized loop trails cross this portion of the Fleecer Range and connect to the Continental Divide National Scenic Trail. Hunting is the biggest use, with some of the highest hunter densities in the State. Dispersed camping is common along Forest roads, especially near streams and riparian zones.

Vegetation management provides wood products and forage for livestock and big game.

The area provides supplemental secure wildlife habitat adjacent to two wildlife management areas. Travel is regulated to provide late fall and winter security for elk. Winter non-motorized allocations protect winter elk security adjacent to Fleecer Mountain Wildlife Management Area.

German Gulch is a Key Fish Watershed managed to conserve natural fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Roads for timber harvest

Motor vehicles on roads and trails year-round

Scattered campsites along roads

Remnants of historic mining and current mining activity or reclamation

Livestock

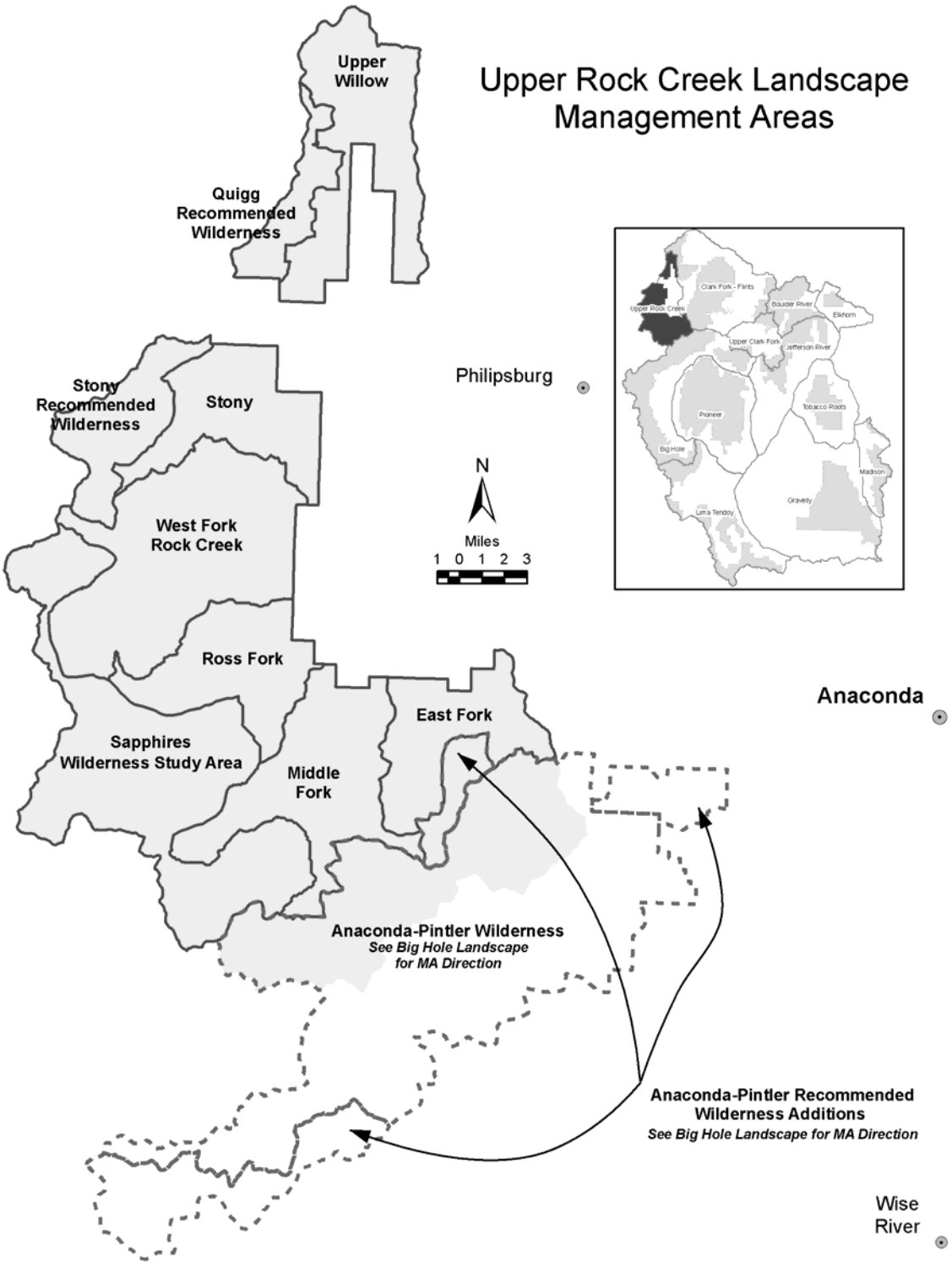
Objectives in addition to Forestwide Objectives

Manage, harden and designate dispersed camping sites to concentrate campers and reduce impact to soils and aquatic resources

Provide a separate loop opportunity for non-motorized use

Standards in addition to Forestwide Standards

None


Upper Rock Creek Landscape Management Areas
Upper Willow
Quigg Recommended Wilderness
Stony Recommended Wilderness
Stony
West Fork Rock Creek
Ross Fork
Sapphires Wilderness Study Area
Middle Fork
East Fork
Philipsburg
Anaconda
Wise River
N
Miles
1 0 1 2 3
Anaconda-Pintler Wilderness
See Big Hole Landscape for MA Direction
Anaconda-Pintler Recommended Wilderness Additions
See Big Hole Landscape for MA Direction
Clark Fork - Flints
Upper Rock Creek
Boulder River
Elkhorn
Upper Clark Fork
Jefferson River
Pioneer
Tobacco Roots
Big Hole
Madison
Gravelly
Lima Tendoy

UPPER ROCK CREEK LANDSCAPE

The Upper Rock Creek landscape is characterized by high rocky peaks on the south and more rounded and forested yet steep mountain summits along its western edge. Vegetation in Upper Rock Creek varies from open grasslands in the lower elevations to whitebark pine and subalpine larch at the timberline. Ponderosa pine is a minor component but is unique on this Forest and provides habitat for flammulated owls.

Lodgepole pine dominates, and most of the lodgepole community type consists of large blocks of mature forest. Douglas-fir grows on the sunnier south and west facing slopes, and subalpine fir and Engelmann spruce grow along stream bottoms and shadier north and east aspects. The landscape provides secure habitat for wide ranging wildlife species between the Sapphire Mountains to the south and Garnet Range to the north. Bighorn sheep, mountain goats, elk, moose and many other wildlife species live here. Rock Creek supports relatively strong populations of native trout, notably bull trout and westslope cutthroat trout. Rock Creek and all major tributary streams are designated important habitat for bull trout, and figures prominently in the recovery plan for this species listed under the Endangered Species Act.

Most of the area along Rock Creek itself is under the jurisdiction of the Lolo National Forest but the upper forks draining into Rock Creek are administered by the Beaverhead-Deerlodge National Forest. Nearly one third of National Forest System lands in upper Rock Creek are a part of the Anaconda-Pintler Wilderness or the Sapphire Wilderness Study Area. Rock Creek is a national class one trout stream, and segments are managed as eligible for National Recreational River designation on both the Beaverhead-Deerlodge and Lolo National Forests.

Many people place recreation and aesthetics as the highest value of this landscape. Rock Creek is a destination for a wide range of recreational pursuits. There are numerous developed and dispersed camping sites and trailheads. The quality of the fishing experience draws anglers from around the world, and many from Missoula. Big game hunting, camping, hiking, horseback riding, pleasure driving, and snowmobiling draw visitors to Rock Creek. The landscape serves as both provider and refuge for the surrounding communities in Granite, Deer Lodge, Missoula and Ravalli counties.

East Fork Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 11% Summer Motorized Travel Not Allowed
- 14% Winter Motorized Travel Not Allowed

Recreation Allocations

- 13% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 11% Summer Non-motorized
- 6% Backcountry Recreation
- 70% Road-based
- 0% Wilderness Study Area

Winter

- 14% Winter Non-motorized
- 73% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 58% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles 1 0.5 0

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Petersen Meadows

Windy Ridge RNA

Dexter Basin RNA

CDNST

East Fork Management Area

This area is managed for native fish conservation, recreation, and livestock grazing.

The recreation setting is mostly roaded with some semi-primitive areas bordering the Anaconda Pintler Recommended Wilderness. The area provides a transition between the development around Georgetown Lake and primitive areas in the Anaconda Pintler Wilderness. East Fork Campground and East Fork Reservoir are popular recreation destinations for those seeking a less crowded experience. Dispersed camping and big game hunting are also popular activities. The area is a popular with snowmobilers and provides groomed trails. The east side of the drainage is closed to motorized use in winter to protect big game winter range.

Other land uses include livestock grazing and water storage for irrigation at East Fork Reservoir. Vegetation may be managed for watershed restoration or a number of other resource objectives like livestock forage production.

Meadow Creek is a fisheries key watershed managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer, fall, and winter

Campers and visitors at trailheads for the Anaconda-Pintler Wilderness

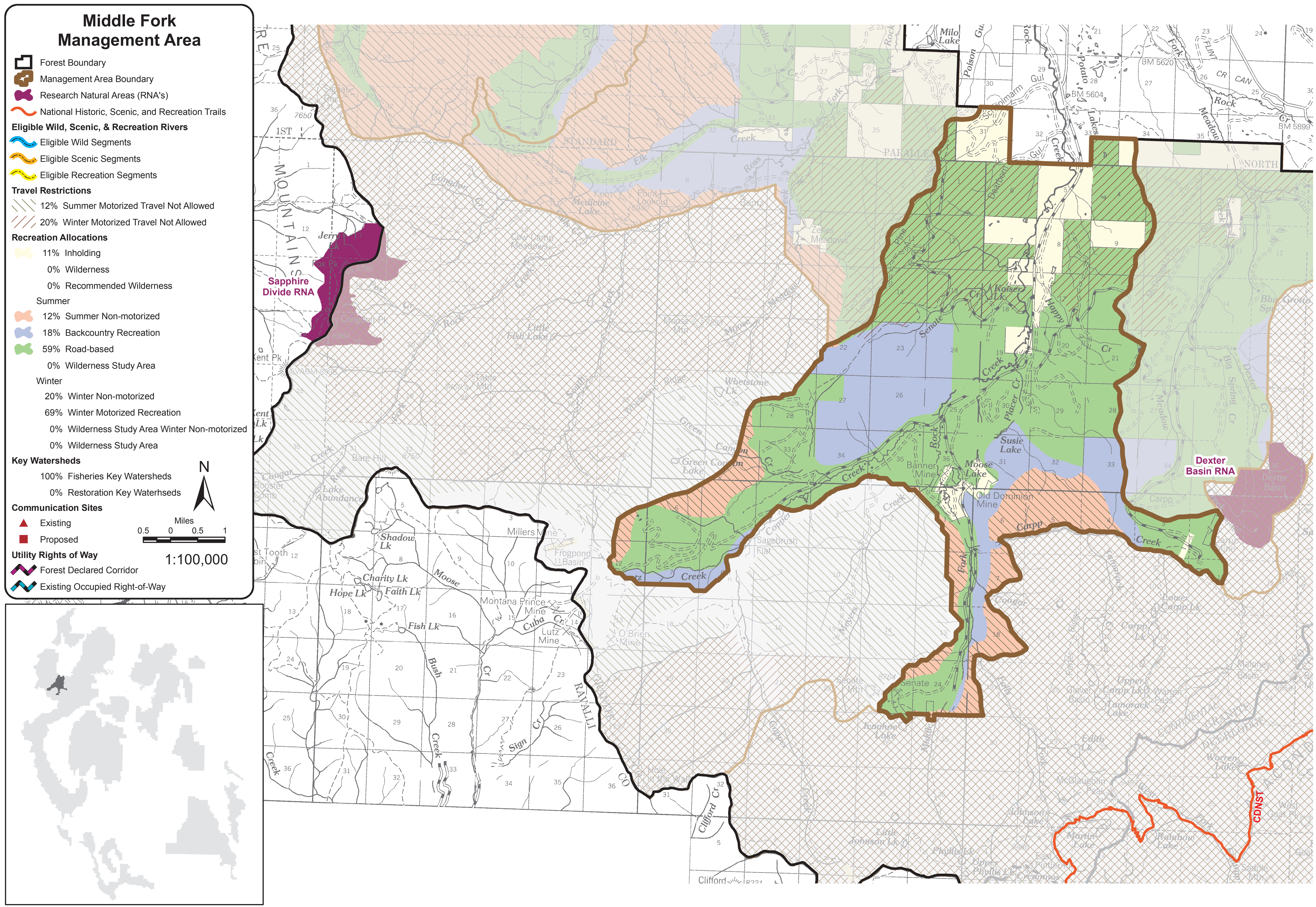
Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None


Middle Fork
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
12% Summer Motorized Travel Not Allowed
20% Winter Motorized Travel Not Allowed
Recreation Allocations
11% Inholding
0% Wilderness
0% Recommended Wilderness
Summer
12% Summer Non-motorized
18% Backcountry Recreation
59% Road-based
0% Wilderness Study Area
Winter
20% Winter Non-motorized
69% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
100% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
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Sapphire Divide RNA
Dexter Basin RNA
CDNST
Milo Lake
Medicine Lake
Cow Camp Meadows
Zekes Meadows
Little Fish Lake
Moose Mtn
Whetstone Lk
Green Canyon Lake
Bare Hill
Lake Abundance
Shadow Lk
Charity Lk
Hope Lk
Faith Lk
Fish Lk
Millers Mine
Frogpond Basin
Montana Prince Mine
Lutz Mine
O'Brien Mine
Sagebrush Flat
Kaiser Lk
Susie Lake
Moose Lake
Banner Mine
Old Dominion Mine
Senate Mtn
Ivanhoe Lake
Lower Carpp Lk
Carpp Lk
Upper Carpp Lk
Tamarack Lake
Glover Basin
Warren Pass
Maloney Basin
Edith Lk
Warren Lake
McGlaughlin Peak
Johnson Lake
Martin Lake
Rainbow Lake
Little Johnson Lk
Phyllis Lk
Upper Phyllis Lk
East Pintler Peak
West Goat Pk
Saddle Mtn
Dexter Basin
Clifford
Hole in the Wall
RAVALLI
GRANITE
DEERLODGE
CONTINENTAL
STANDARD
PARALLEL
NORTH

Middle Fork Management Area

This area is managed for native fish conservation and recreation.

The recreation setting ranges from roaded at lower elevations, to semi-primitive non-motorized at higher elevations against the Wilderness and Wilderness Study Area, and includes altered to natural appearing scenery consistent with the settings. The area is popular for fishing, hunting, and both motorized and non-motorized recreation. It contains the Copper Creek Campground and Wilderness trailheads. Frog Pond Basin is a destination for snowmobiling.

Moose Lake is an exception to the setting where historic mining resulted in private in-holdings with a number of cabins occupied seasonally and year round. Recreation residences are authorized on Forest Service lands in the same area.

The entire management area is important for habitat for bull trout and managed as a key fisheries watershed. Vegetation may be managed a variety of resource objectives.

Visitors may encounter

Vegetation changes from timber harvest or fire

Campers dispersed along roads near Middle Fork and Copper creeks.

Motor vehicles on roads and trails in summer, fall, and winter

Developed trailheads for access to higher elevations

Livestock

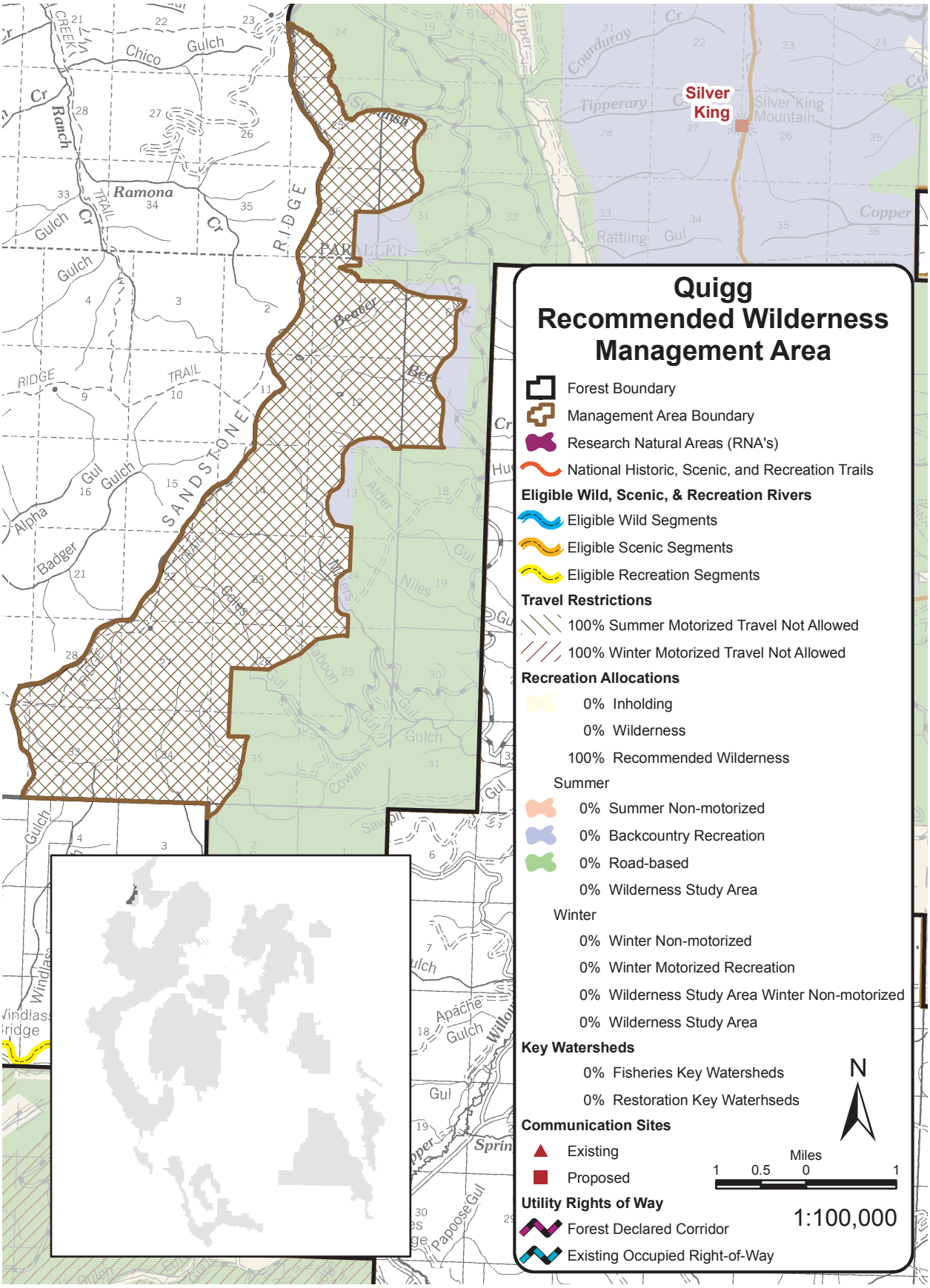
Objectives in addition to Forestwide Objectives

Manage, harden and designate dispersed camping sites to concentrate campers and reduce impact to soils and aquatic resources

Restore vigor in riparian willow communities where willow is declining

Standards in addition to Forestwide Standards

None


Quigg
Recommended Wilderness
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
100% Summer Motorized Travel Not Allowed
100% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Inholding
0% Wilderness
100% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
0% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
0% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
0% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
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Silver King
Silver King Mountain
Ramona
Chico Gulch
Ranch Cr
Sandstone Ridge
Parallel Ridge
Beaver
Alpha Gulch
Badger Gulch
Niles
Alder
Cowan
Apache Gulch
Windlass Ridge
Courduroy
Tipperary
Rattling Gul
Copper
Papoose Gul

Quigg Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and to provide recreation with high levels of challenge and solitude.

The recreation setting is semi-primitive non-motorized and natural appearing. The area provides opportunities for challenging primitive recreation, all non-motorized. The Quigg area is managed in conjunction with an adjacent roadless area on the Lolo National Forest. Visitors access the area from the Rock Creek road through the Lolo NF.

Vegetation is managed primarily through prescribed and natural fire. Other ecosystem components are regulated primarily by natural processes and events. Wildlife security is important along the top of this mountain range and benefits from motorized prohibitions in this area.

Visitors may encounter

Quiet natural landscapes

Native vegetation changes from fire and other natural events

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

The Minimum Scenic Integrity Objective – Very High

Management changes if released from wilderness designation

Semi-primitive non-motorized summer and winter

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

Ross Fork Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 30% Summer Motorized Travel Not Allowed
- 18% Winter Motorized Travel Not Allowed

Recreation Allocations

- 18% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 30% Summer Non-motorized
- 13% Backcountry Recreation
- 39% Road-based
- 0% Wilderness Study Area

Winter

- 18% Winter Non-motorized
- 64% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 100% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

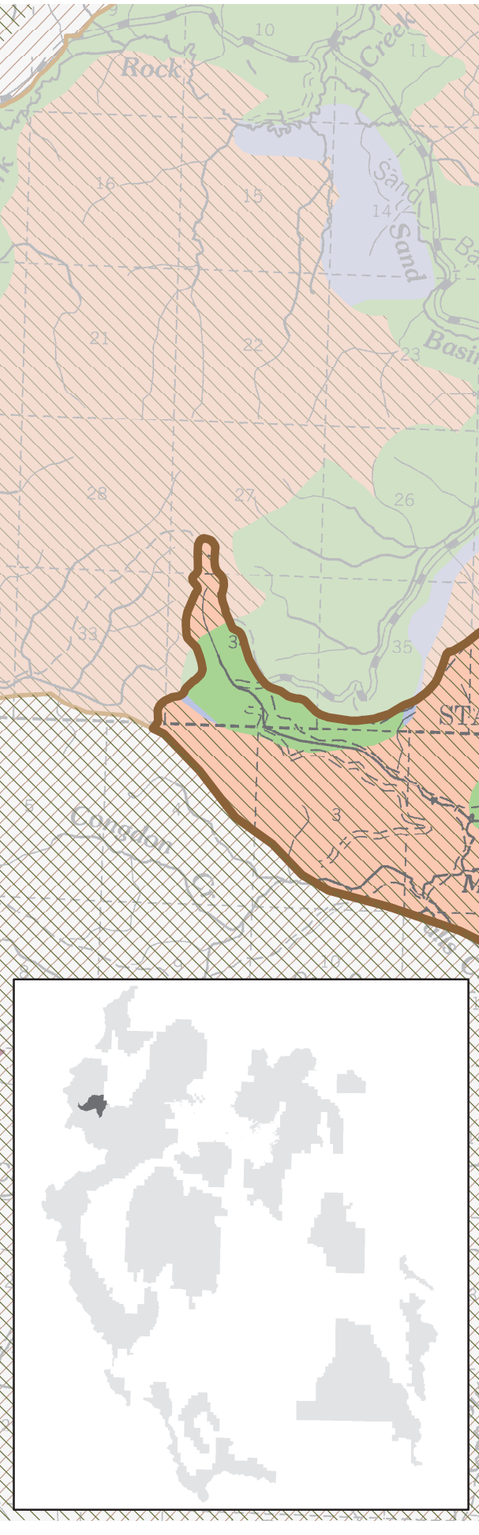
- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

0.5 0.25 0 0.5

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Ross Fork Management Area

This area is managed for native fish conservation, dispersed recreation, and secure winter wildlife habitat.

Recreation takes place in a mix of semi-primitive and roaded settings. Low standard roads off the primary access are located in minimally roaded lands between the non-motorized area and private lands. Non-motorized trails connect to the Wilderness Study Area. This area is popular for big game hunting. Medicine Lake is a popular recreation destination in both summer and winter. Roads and trails provide access to snowmobile play areas.

A winter closure protects big game winter range.

The entire management area is important for habitat for bull trout and managed as a fisheries key watershed. Vegetation may be managed a variety of resource objectives.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and some trails in summer, fall, and winter

Livestock

Objectives in addition to Forestwide Objectives

Maintain opportunities for primitive 4-wheel driving routes

Restore vigor in riparian willow communities where willows are declining

Standards in addition to Forestwide Standards

None

Sapphires Wilderness Study Area Management Area

- Forest Boundary
- Management Area Boundary
- Non-FS Inholding
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 91% Summer Motorized Travel Not Allowed
- 78% Winter Motorized Travel Not Allowed

Recreation Allocations

0% Inholding
0% Wilderness
0% Recommended Wilderness

Summer

0% Summer Non-motorized
0% Backcountry Recreation
0% Road-based
100% Wilderness Study Area

Winter

0% Winter Non-motorized
0% Winter Motorized Recreation
78% Wilderness Study Area Winter Non-motorized
22% Wilderness Study Area

Key Watersheds

100% Fisheries Key Watersheds
0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

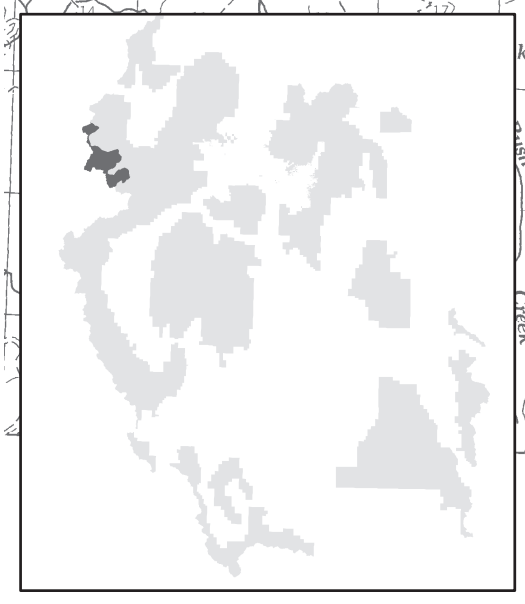
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Emerine Repeater

Sapphire Divide RNA

Senate Mtn



Sapphire Mountains Wilderness Study Area Management Area

This area is managed to protect Wilderness character, and to provide dispersed recreation and other activities consistent with the designation.

This Wilderness Study Area was designated in 1977 (P.L.95-150), to study the potential for inclusion into the National Wilderness Preservation System. It is part of both the Beaverhead-Deerlodge and Bitterroot national forest. Wilderness characteristics were assessed in the 2006 Wilderness Study Area Characteristic Study assessment housed at the Forest Supervisor's Office.

The recreation setting is semi-primitive with predominantly natural appearing scenery. Summer non-motorized trails and a few miles of motorized trails are provided including portions of Trail #313. The semi-primitive motorized setting is based on motorized use existence prior to 1977. Big game hunting and snowmobiling, particularly around Frog Pond Basin, are popular

The entire management area is a fish key watershed important for bull trout habitat. Vegetation is managed through prescribed and natural fire. Other ecosystem components are regulated by natural processes and events.

Visitors may encounter

Vegetation changes from fire and other natural events

Motorized use on specific trails in summer and fall

Snowmobilers

Livestock

Objectives in addition to Forestwide Objectives

Develop an historic preservation plan for the traditional cultural property to ensure protection and consistent management with the Bitterroot National Forest

Standards in addition to Forestwide Standards

Trail #313: Motorized use will conform to Bitterroot National Forest direction from Frog Pond Basin to the north and west

Trail #313: Motorized use is permitted from Frog Pond Basin to O'Brien Mine.

Trail #313: Motorized use is prohibited from O'Brien Mine south.

Manage according to the Montana Wilderness Study Act, P.L.95-150

Timber harvest is prohibited

The Minimum Scenic Integrity Objective - High

Stony Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 18% Summer Motorized Travel Not Allowed
- 56% Winter Motorized Travel Not Allowed

Recreation Allocations

- 7% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 18% Summer Non-motorized
- 3% Backcountry Recreation
- 72% Road-based
- 0% Wilderness Study Area

Winter

- 56% Winter Non-motorized
- 37% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 43% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0

1:63,360

West Fork Buttes Botanical Area proposed SIA

Stony Management Area

This area is managed for native fish conservation, recreation, and secure winter wildlife habitat.

The recreation setting ranges from roaded to semi-primitive non-motorized. Rock Creek runs through part of this Management Area. Vestiges of historic mining can be seen throughout the area. Bighorn sheep can be viewed from the Rock Creek Road. Stony Creek Campground provides developed camping opportunities along the Forest boundary. The east half of the area provides road based recreation. The south and west portions lie adjacent to the Stony Recommended Wilderness and provide access to non-motorized trail opportunities.

Winter range for big game, including bighorn sheep, is protected through winter travel closures. Vegetation may be managed for a variety of resource objectives.

Stony Creek is a fisheries key watershed managed to conserve native fish populations.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer and fall

Campers dispersed along roads and in campgrounds

Historic mining remnants and current mining activity or reclamation

Livestock

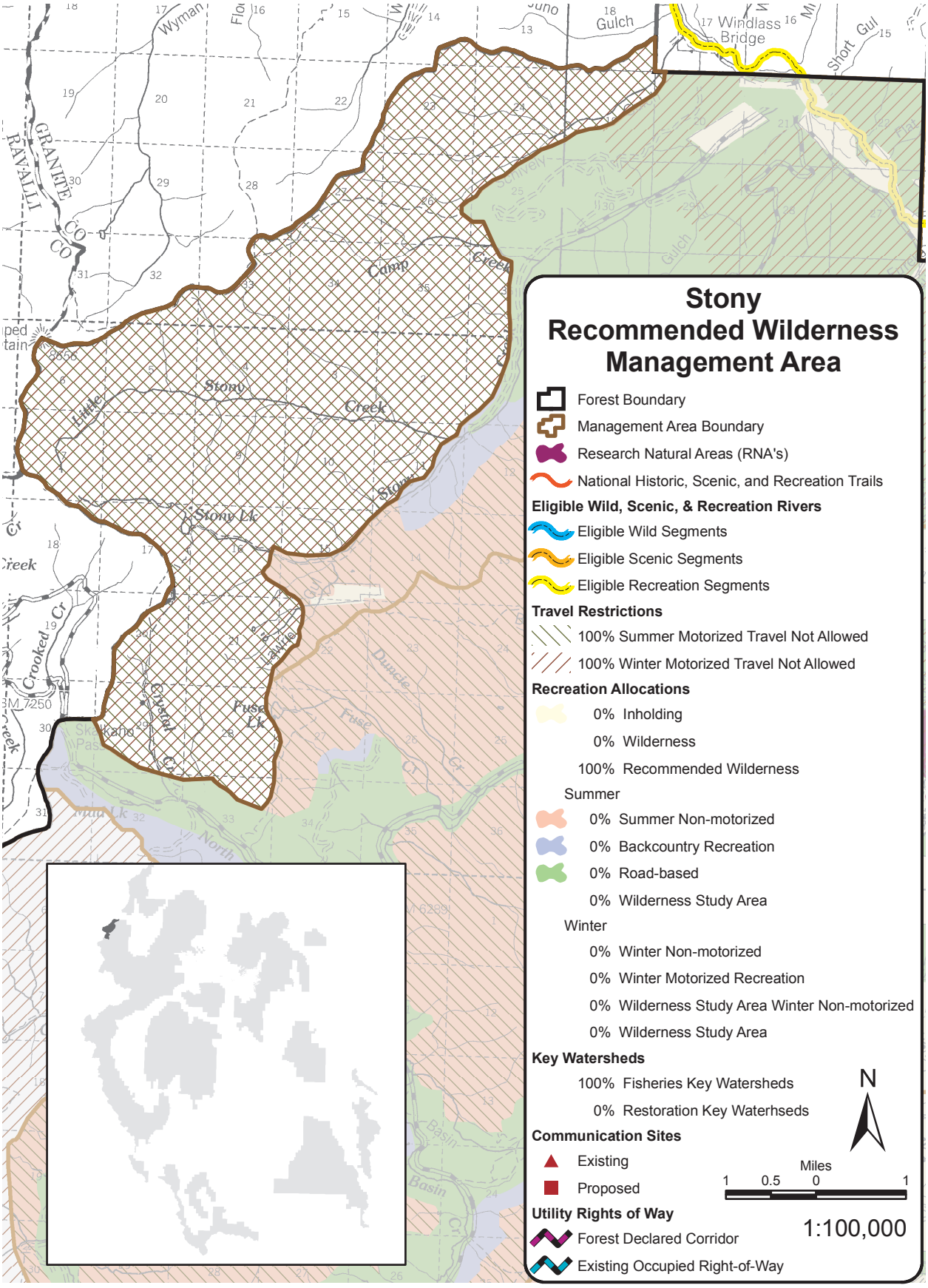
Objectives in addition to Forestwide Objectives

Harden, close, or improve dispersed and developed recreation sites to reduce impact to soils and aquatic resources

Control weeds in bunchgrass communities to protect areas value as forage for bighorn sheep and big game

Standards in addition to Forestwide Standards

None


Stony
Recommended Wilderness
Management Area
Forest Boundary
Management Area Boundary
Research Natural Areas (RNA's)
National Historic, Scenic, and Recreation Trails
Eligible Wild, Scenic, & Recreation Rivers
Eligible Wild Segments
Eligible Scenic Segments
Eligible Recreation Segments
Travel Restrictions
100% Summer Motorized Travel Not Allowed
100% Winter Motorized Travel Not Allowed
Recreation Allocations
0% Inholding
0% Wilderness
100% Recommended Wilderness
Summer
0% Summer Non-motorized
0% Backcountry Recreation
0% Road-based
0% Wilderness Study Area
Winter
0% Winter Non-motorized
0% Winter Motorized Recreation
0% Wilderness Study Area Winter Non-motorized
0% Wilderness Study Area
Key Watersheds
100% Fisheries Key Watersheds
0% Restoration Key Waterhseds
Communication Sites
Existing
Proposed
Utility Rights of Way
Forest Declared Corridor
Existing Occupied Right-of-Way
N
Miles
1 0.5 0 1
1:100,000

Stony Recommended Wilderness Management Area

This area is managed to protect wilderness characteristics and to provide yearlong recreation with high levels of challenge and solitude.

This area is contiguous with roadless areas on the Lolo and Bitterroot National Forest and the Skalkaho Game Preserve. The recreation setting is semi-primitive and natural appearing. Hunting is the most common activity in the area. Visitors travel by foot or on horseback. Access is available from Rock Creek road and the Skalkaho highway.

Vegetation is managed primarily through prescribed or natural fire. Other ecosystem components are regulated by natural processes and events.

Visitors may encounter

Native vegetation changes from fire and other natural events

Wildlife including forest carnivores

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

Minimum Scenic Integrity Objective – Very High

Management changes if released from wilderness designation

Semi-primitive non-motorized summer and winter

Minimum Scenic Integrity Objective - High

Mountain bikes are allowed

Upper Willow Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Travel Restrictions

- 11% Summer Motorized Travel Not Allowed
- 0% Winter Motorized Travel Not Allowed

Recreation Allocations

- 3% Non-FS Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 11% Summer Non-motorized
- 44% Backcountry Recreation
- 42% Road-based
- 0% Wilderness Study Area

Winter

- 0% Winter Non-motorized
- 97% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 0% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles
1 0.5 0

1:63,360

Silver King

Black Pine Lookout

Upper Willow Management Area

This area is managed for dispersed recreation and other resource uses.

Recreation takes place in settings ranging from mostly roaded on the south end to semi-primitive non-motorized on the north end. The most common recreational activities are big game hunting and dispersed camping. A county road lies on the east side of Upper Willow Creek and an administratively closed Forest Service road runs along the creek on the west side. Historic mining and homesteading in the valley bottoms and some upland areas have resulted in private lands surrounded by Forest lands. One recreation residence lot is authorized in this area.

Vegetation may be managed for a number of resource objectives, including livestock forage production. Some areas remain non-motorized to provide secure areas in summer and fall for wildlife movement.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer, fall, and winter

Dispersed campsites along roads

Historic mining remnants and current mining activity or reclamation

Livestock

Objectives in addition to Forestwide Objectives

None

Standards in addition to Forestwide Standards

None

West Fork Rock Creek Management Area

- Forest Boundary
- Management Area Boundary
- Research Natural Areas (RNA's)
- National Historic, Scenic, and Recreation Trails

Eligible Wild, Scenic, & Recreation Rivers

- Eligible Wild Segments
- Eligible Scenic Segments
- Eligible Recreation Segments

Travel Restrictions

- 49% Summer Motorized Travel Not Allowed
- 7% Winter Motorized Travel Not Allowed

Recreation Allocations

- 12% Inholding
- 0% Wilderness
- 0% Recommended Wilderness

Summer

- 49% Summer Non-motorized
- 3% Backcountry Recreation
- 36% Road-based
- 0% Wilderness Study Area

Winter

- 7% Winter Non-motorized
- 81% Winter Motorized Recreation
- 0% Wilderness Study Area Winter Non-motorized
- 0% Wilderness Study Area

Key Watersheds

- 100% Fisheries Key Watersheds
- 0% Restoration Key Waterhseds

Communication Sites

- Existing
- Proposed

Utility Rights of Way

- Forest Declared Corridor
- Existing Occupied Right-of-Way

N

Miles

0.5 0 0.5 1

1:100,000

West Fork Buttes Botanical Area proposed SIA

Emerine Repeater

Sapphire Divide RNA

West Fork Rock Creek Management Area

This area is managed for native fish conservation, dispersed recreation, and secure winter wildlife habitat.

The recreation setting is roaded through the Skalkaho Highway corridor and on low elevation forested slopes. Much of the remaining area is semi-primitive non-motorized. The Skalkaho Highway, Montana Highway 38, is a popular summer road and winter snowmobile trail. Sand Basin and Burnt Fork on the Bitterroot National Forest are popular snowmobile play areas. Crystal Creek Campground and Mud Lake Fishing Access provide developed recreation opportunities.

The entire management area is important for habitat for bull trout and managed as a fisheries key watershed. Vegetation may be managed a variety of resource objectives.

Visitors may encounter

Vegetation changes from timber harvest or fire

Motor vehicles on roads and trails in summer, fall, and winter

Dispersed camping is popular along Sand Basin Creek and the West Fork of Rock Creek.

Livestock

Objectives in addition to Forestwide Objectives

Restore vigor in riparian willow communities where willows are declining

Standards in addition to Forestwide Standards

None

CHAPTER 5 - MONITORING AND EVALUATION

The purpose of monitoring and evaluation is to evaluate, document and report how well the forest plan is applied, how well it works, and if the purpose and direction remain appropriate. Monitoring determines actual conditions and circumstances and compares them with assumptions and desired results. Evaluation examines conditions as a result of management, identifies the reason desired conditions are not met and proposes alternative solutions.

Adaptive management allows the use of alternative solutions to meet desired conditions. It includes defining measurable objectives, monitoring, learning and making changes, and recognizing uncertainties of outcomes. Monitoring and evaluating the effects of forest plan implementation is critical to adaptive management. Other components include inventory, assessment, planning, and implementation.

Monitoring and Evaluation Strategy

Forest plan monitoring and evaluation strategy is straightforward and tightly focused on critical goals and objectives laid out in the plan. Elements will include requirements from the National Forest Management Act, as well as other pertinent laws and regulations.

Through monitoring and evaluation requirements in past forest plans it became apparent that budgets constrain the amount of monitoring and data collection accomplished. As a result a secondary goal was developed to keep requirements within current budget and workforce limitations. Monitoring and evaluation questions were further refined using the following criteria to establish priority items. Each of the questions responds to at least one of the following drivers.

1. New untested management assumptions (implementation of new concepts like key watersheds).
2. Large gap identified between existing and desired conditions (aspen cover is currently less than 20% of the low end of the historic range of variation for aspen).
3. Critical system components could be affected (riparian function).
4. Unacceptable consequences from lack of information (occupation of habitats by invasive species).
5. Key issue for the public (travel management and specifically, motorized closures).
6. Legal compliance (sufficient stocking of suitable timber lands).
7. National strategic plan component (Goals & Objectives as described in Fiscal Years 2004 through 2008).

Performance measures and methodologies were selected with the following principles in mind.

- Keep it simple and relevant to the purpose.
- Keep it adaptive. Systems are always in a state of flux, as is the imprint of management on such systems
- Keep it affordable. Use corporate data and standardized national protocols when available, (FIA, NVUM, Region 1 Aquatic Monitoring, etc).
- Recognize that systems are interrelated. Select components of systems that can tell more than one story.
- Look for trends over long periods, not snapshots in time. The goal of resource management is resilience. The intent is to maintain the capacity of systems to renew themselves and thrive, not just survive for a time.
- Describe what to measure but don't prescribe a specific technique unless it is tied to corporate data or standardized national protocols. Science improves, methodologies change.

Additional screening considerations for methodologies include: availability of baseline data, availability of protocols/methods, scale and extent, precision and reliability, sufficiency to address the indicator, availability of partners, utility for analysis and evaluation, appropriateness of scale, frequency of measurement, and technical requirements

Monitoring identified in this section does not include monitoring conducted in compliance with other laws, policies, and site-specific decisions. Examples are compliance with the Environmental Management Systems (EMS), Biological Opinion for bull trout, the Settlement Agreement for the Beaverhead Riparian Grazing Lawsuit, progress toward removing streams from the State's 303D list, and project implementation monitoring.

Forest Plan Evaluation and Reports

Forest plan evaluation uses information gathered during monitoring to judge how decisions have been applied and how effective they have been. It describes what has been learned along the way and how valid the assumptions are that led to those decisions.

The Forest Supervisor will maintain monitoring information for public review and will evaluate it on a periodic basis to determine, among other things, the need for amendment or revision of the forest plan. Implementation of objectives and standards will be tracked and reported annually. Effectiveness of goals will be measured and reported every five years, unless the Beaverhead-Deerlodge Forest Supervisor determines a shorter timeframe is warranted for some evaluations. It is difficult to discern trends in forestwide conditions in less than five years. A formal five year comprehensive evaluation report will provide a review of monitoring questions and regulatory review requirements, including any recommendations for changes.

If the Five Year Comprehensive Evaluation Report concludes monitoring questions are not being answered by the performance measure, or the desired trend is not being achieved, further action will be taken. The results of the evaluation will lead to a decision about further action of the following types:

- Refer the problem to the appropriate line officer for improvement of the application of the management practice;
- Modify the management practice as a forest plan amendment;
- Modify the land management prescription as a forest plan amendment;
- Modify the performance measure so it better answers the question;
- Revise the projected outputs;
- Revise the cost/unit projection, or
- Initiate revision of the forest plan.

Monitoring will be adaptive. The Five-Year Comprehensive Evaluation Report may conclude new information, such as science, technology, or legal requirements, requires addition or modification of monitoring questions. Recommendations for changing monitoring elements will meet the criteria and principles outlined in the previous section of this chapter.

MONITORING ELEMENTS

The following table displays the monitoring plan for the Beaverhead-Deerlodge Forest Plan. This monitoring plan reflects important forest plan decisions. It includes nine areas of focus linking key goals and objectives to elements of the National Monitoring and Evaluation Framework and Northern Region Monitoring Framework. The intent is to answer regional and national monitoring questions as well as forest plan questions.

For each area questions are posed along with one or more performance measures. The table addresses requirements from the 36 CFR 219.12(k) (4) of 1982, and includes:

- The actions, effects or resources to be measured, and the frequency of measurements;
- Expected precision and reliability of the monitoring process
- Timeframes for evaluation and reporting.

Because data precision and reliability are tied to specific procedures and methods that change, updates of the Forest Monitoring Section will be made to take that into account.

Monitoring and evaluation is planned for each area described in the table, but actual budget levels, funding emphasis, and emergence of new issues may affect accomplishment. Even with changes in funding tied to current issues, monitoring and evaluation are expected to show some movement toward objectives in each focus area. Partnerships will be developed to accomplish more monitoring and evaluation.

Table 15. Forest Monitoring and Evaluation Format

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
Soil Water and Air Resources	**Watershed Health**				
1 GOAL (watersheds)	Is the ecological condition of watersheds improving on the forest?	Percent of watersheds in functioning status or improving trend, measured by changes in key characteristics identified in Forest Plan objectives, by 6th code HUC	R1 Aquatic Monitoring and analysis. 30 *random response reach* sample points reread every 6th year - NRIS data base monitored by RMRS Regional 5-year report.	M – 5 years R – 5 years	High
2 GOAL (key watersheds)	Have restoration activities identified through watershed assessment resulted in improved watershed condition?	Percent of key watersheds in functioning status or improving trend, measured by changes in key characteristics identified in Forest Plan objectives, by 6th code HUCs	Intensify R1 Aquatic Monitoring and analyses by adding sample points in the *lowest response reach of each watershed with a completed assessment* and project list.	M – 5 years R – 5 years	High
3 OBJECTIVE (watershed analysis)	Are restoration and conservation activities focused in priority (key) watersheds?	Number of watershed plans completed, number and type of projects completed in key and other watersheds.	Report annual accomplishments of plans and projects.	M– Annual R – Annual	High
4 GOAL (stream channels)	Are stream and riparian conditions improving?	Percent of stream channels functioning or in upward trend.	Reread stream and riparian transects at 5-year intervals, representing key watersheds and management activities. Allotment inspection notes on compliance with grazing standards.	M – 5 years R – 5 years	High

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
5 GOAL (watersheds)	Are management activities effectively maintaining conditions for native species reproduction?	Changes in abundance of populations of the mayfly (*drunella dodsii*) as an indication of changing sediment levels.	Sampling points on response reaches of sub-watersheds selected to represent potential sediment producing activities or restoration activities.	M – Annual R – Annual	Moderate
6 LEGAL (land productivity, 1982 36 CFR 219.12 (k)(2))	Are soil and water conservation practices (BMPs) being implemented during project work and are they resulting in protection of water quality and beneficial uses?	BMPs implemented and percent rated effective	Annual review of at least one project, including fuels reduction, timber harvest, minerals and grazing. Compare BMPs prescribed by EA, EIS or contract, to see if BMPs were followed and were effective	M – Annual R – Annual	Moderate to High
7 GOAL (Soil productivity)	How are management actions maintaining soil quality?	Effects of treatments on areas treated.	Inspection reports, daily diaries resource compliance monitoring, BMP monitoring and evaluation	M – 5 years R – 5 years	
Biological Diversity	**Ecosystem Diversity**				
8 GOAL (Biodiversity)	What is the current condition and trend for key characteristics of vegetation diversity identified in the forest plan?	Changes and trends in vegetation composition and structure forestwide. Measure by changes in forest dominance types by size class, distribution and density of sagebrush in sagebrush/grasslands, percent of old growth, number of snags, and tons of coarse woody debris. Broad scale Regional change for key characteristics.	Inventory based on FIA national inventory and/or other local Forestwide or project level inventories Region One 5 year monitoring summaries compiled forestwide, and by section or province where appropriate.	M – 5 years or sooner R – 5 years M – 5 years R – 5 years	High

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
9 OBJECTIVE (Forested vegetation)	Are management activities restoring aspen at the rate projected in the forest plan?	Acres of aspen restored (treated or converted by wildfire).	Acres treated from accomplishment reports (FACTS), acres converted from FIA	M - Annual R - Annual	Moderate to High.
10 OBJECTIVE (Grassland/Shrubland)	Are management activities restoring grassland/shrublands at the rate projected in the forest plan?	Acres of encroachment species treated (all methods) or converted by wildfire	Acres treated annually from accomplishment reports (FACTS), acres converted using post burn surveys or FIA	M - Annual. R - Annual	High
	Species Diversity				
11 OBJECTIVE (Reference populations sensitive plants)	Are we maintaining static or upward trends in globally designated 1, 2 & 3 sensitive plants (downward trend drives Conservation Strategy)?	Change in cover or number of plants.	Plant survey.	M - 5 years R - 5 years	High
12 GOAL (Sagegrouse)	Are management activities affecting sage grouse brood rearing habitat?	Acres of vegetation treatments on BDNF lands within 18 km of historic or active leks.	Annual reports on lek locations obtained from partners (local sage grouse working groups) and MTFWP. Acres treated from accomplishment reports (FACTS)	M - Annual R - Annual	High
13 Goal (Elk Habitat)	How are populations of elk changing?	Population data for elk from Montana Fish Wildlife & Parks	Annual MTFWP reports on animal numbers and licenses issued.	M – Annual R – Annual	High

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
14 Goal (Wildlife Security) *row below	Are management activities effectively protecting high elevation winter habitats for mountain goats and wolverines?	Populations of mountain goats from MT Fish Wildlife & Parks. Number of snowmobile entries into non-motorized high elevation units protected for wolverines and mountain goats. Presence or absence of wolverines in high elevation habitats.	Annual MTFWP reports on animal numbers and licenses issued. Results of aerial observation flights and field observations. Bait stations, DNA testing, and track surveys obtained from MT FWP and other partners.	M – Annual R - Annual	Moderate to High
*The Mount Jefferson Recommended Wilderness boundary will be monitored for illegal snowmobile intrusions into the wolverine habitat closure. Illegal use will be monitored during the period open to snowmobiles December 2 to May 15 and any other time of the year snow conditions make snowmobiling possible. The number and distance of intrusions into the closed area will be recorded. A reassessment of the decision to allow snowmobile use will be triggered if: (1) Illegal intrusions are documented throughout the closure period. (2) Illegal intrusions penetrate the closed area. (3) Illegal intrusions extend as far as the BLM Wilderness Study Area.					
15 GOAL (secure habitat)	Are road and trail densities trending toward goals described by landscape?	Change in open motorized road and trail density for both seasons by landscape.	Forest Road and Trail inventory (GIS)	M - 5 years R – 5 years	
Land Health and Vitality	**Invasive Species**				
16 OBJECTIVE – (noxious weeds)	Are management actions preventing or controlling new and existing infestations of weeds?	Change in acres of known noxious weed infestations. Number of sites of new species and extent.	Forest data base FACTS, NRIS, eventually FIA. Annual review of reports of known species and locations	M - Annual R - Annual	Moderate to
	Native Insects and Pathogens				

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
17 LEGAL (insects and disease , 1982 36 CFR 219.12(k)(5)(iv)	Are levels of insect and disease increasing to damaging levels as a result of management activities?	Changes in acres infested by landscape, % change on the forest compared to the Region.	Results of Regional Forest Health Program	M - Annual R - Annual	Moderate
	Resilience to Fire Disturbance				
18 OBJECTIVE (Wildland Urban Interface)	Are fuels reduction projects being implemented in high risk urban interface areas?	Acres in wildland urban interface areas (WUI) of reduced fuel loadings and crown fire risk.	Acres of WUI acres treated based on targets and accomplishments (FACTS Database)	M - Annual R - Annual	High
Social Benefits	**Recreation opportunities and settings**				
19 GOALS (allocations, opportunities)	Is the BDNF providing desired recreation opportunities?	Change in visitor numbers, activities, demographics, and satisfaction.	Compare 5 year National Visitor Use Monitoring survey and report data for the forest. Available 2005, 2010, 2015)	M - 5 years R - 5 years	High
20 GOAL (opportunities)	Are management actions resulting in the desired recreation settings?	Change in percent of Forest in each recreation allocation and ROS class.	Map and tabulate current ROS, compare to 2005 baseline ROS and FEIS predicted ROS for selected alternative. Compare ROS to allocations.	M – 10 years R – 10 years	High
	Emerging Issues				
21 ALL PLAN COMPONENTS	How is new information (science, technology, requirements) changing monitoring or the Plan?	Research and science findings, monitoring evaluation findings, legal and other requirements.	RMRS, Universities, Annual Monitoring Reports, Regional/National Monitoring and Evaluation.	M – 5 years R - 5 years	High
	Heritage Resources				

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
22 STANDARDS (Heritage 1-4)	Are cultural resources being protected as the forest plan is implemented? Are mitigation measures sufficient to prevent damage to cultural resources from projects?	Number of projects that protect cultural resources.	Review up to 10% of projects in the field.	M - Annual R - Annual	High
Economic Benefits	**Provision of good and services**				
23 GOAL (economy contribution)	What is the status and trend of goods and services provided from the forest?	Quantities of goods and services and the cost of producing them compared to Plan predictions. Contribution of employment and labor income to the 8-county impact area attributable to goods and services provided by the forest.	Report outputs (i.e. AUMs, Board Feet, visitor use, oil and gas or minerals), payments to counties and budget expenditures using FACTS, INFRA and other corporate databases. Model estimated employment and labor income using outputs, revenues, expenditures above (IMPLAN)	M –5 years R - 5 years M -5 years R - 5 years	High High
	Timber Production				
24 GOAL (Lands Suitable for Timber Production)	Are we maintaining the productivity of suitable timber lands?	Acres of suitable timber lands under management compared to acres projected by SPECTRUM to keep lands in rotation.	Acres harvested, regenerated, and thinned on suitable lands- Annual accomplishments from FACTS data base	M -5 years R - 5 years	High

Plan Component	Monitoring Question	Performance Measure	Possible Data Sources	Measurement and Reporting Frequency	Data Precision, & Reliability
Infrastructure Capacity	**Facilities**				
25 OBJECTIVE (Recreation Facilities)	Are we maintaining and reconstructing campgrounds and developed sites on schedule? (30% over the planning period)	Number of developed sites reconstructed.	Report based on accomplishment data base	M- Annual R - Annual	High
	NFMA compliance				
26 LEGAL (1982 36 CFR ((k)(5))	Are we complying with appropriate NFMA requirements?	Stocking of lands	Trees/acre, over percent of area treated by tree species. (FACTS Database)	M - 5 years from treatment R - 5 years	High
		Lands suited for timber production	Lands identified as not suited for timber production examined to determine if they have become suited.	M 5 years R 5 years	High
		Harvest Unit size limits	Maximum size limits for harvest areas evaluated to determine whether such size limits should be continued.	M - 10 years from ROD R - 10 years	High

GLOSSARY

A

Adaptive Management: A type of natural resource management in which decisions are made and adjusted based on testing, monitoring, evaluation, and incorporating new knowledge gained from science or experience as part of an ongoing process.

Adit: A nearly horizontal passage from the surface in a mine.

Affected Environment: The natural, physical, and human-related environment sensitive to changes as a result of the proposed action.

All-Terrain Vehicle (ATV): A type of off-highway vehicle that travels on three or more low-pressure tires; has handle-bar steering; is less than or equal to 50 inches in width; and has a seat designed to be straddled by the operator. (FSM 2353.05)

Allotment (grazing): Area designated for the use of a certain number and kind of livestock for a prescribed period of time.

Allotment Management Plan (AMP): A document applying to management of rangeland ecosystems and livestock operations on the public lands prescribing: (1) the manner in and extent to which livestock operations will be conducted in order to meet ecosystem health, multiple use, economic, and other objectives; (2) describing range improvements to be installed and maintained; and (3) containing such other provisions relating to livestock grazing and other objectives found by the Secretary of Agriculture to be consistent with the provisions of Federal Land Policy and Management Act. An AMP integrates resource objectives, standards, guidelines, and management requirements for soil and water for watershed protection, wildlife and fisheries, recreation, timber, and other resources on lands within a range allotment.

Allowable Use: A predetermined amount of current forage production that is to be removed and/or soil disturbance that is acceptable under a given set of circumstances in order to accelerate range improvement. Degree of use will vary depending upon range type, range condition and trend, season of use, and physiological needs of various species. Allowable use is also often defined as the degree of use estimated to be proper until proper use is known.

Altered Potential: Condition caused by nature or humans that prevents a stream from recovering its original state. An example might be found where a stream has been placer mined, or a landslide or slump changed the immediate landscape features where the stream must function.

Allowable Sale Quantity, (ASQ): On a National Forest, the maximum quantity of timber that may be sold from the area of suitable land covered by the forest plan for a specified time period specified by the plan.

Anadromous: Fish that ascend rivers from the sea for breeding; i.e. salmon.

Animal Unit Month (AUM): The amount of forage required by a 1,000-pound cow, or the equivalent, for one month.

Aquatic Ecosystem Restoration: The establishment of improved hydrologic, geomorphic, and ecological processes in a degraded watershed system; and the replacement of lost, damaged, or compromised elements of the natural system.

Aquatic Systems: The interaction of biological and physical attributes in relation to streams, lakes, rivers, ponds, etc.

Appropriate Management Response (AMR): AMR is any specific action taken in response to a wildland fire suitable to meet protection or resource objectives described in fire or land management plans.

Aquatic Nuisance Species: non-indigenous plant or animal species that threaten the diversity or abundance of native species, the ecological stability of infested waters, or commercial, agricultural, aqua-cultural, or recreational activities dependent on such waters.

Aquatic Systems: Biological and physical attributes and their interaction related to water.

Areas Evaluated for Potential Wilderness: Any undeveloped areas, exceeding 5,000 acres that meet the minimum criteria for wilderness consideration under FS Handbook 1909.12, Chapter 7 (WO Amendment 1909.12-92-1 effective 8/3/1992). The roadless area inventory considers presence of existing roads, structures, or improvements. FSH 1909.12 (1992) specifies these areas “do not contain improved roads maintained for travel by standard passenger type vehicles.”

The evaluation of areas for potential wilderness, documented in the FEIS, Appendix C, complies with the implementing regulations of NFMA, (36 CFR 219.17(1), 1982), which tells us that “roadless areas within the NFS shall be evaluated and considered for recommendation as potential wilderness areas during the forest planning process.”

Inventoried Roadless Areas, on the other hand, are based on the Roadless Area Review and Evaluation II (RARE II) as formalized in the 2001 Roadless Area Conservation Rule (RACR). The areas evaluated for potential wilderness based on the 2004 inventory may include all or only portions of Inventoried Roadless Areas in addition to new areas as explained in the FEIS, Appendix C

Arterial Road: See Functional Class for subcategories under the new definition

B

Beaverhead Unit: The Beaverhead National Forest was combined with the Deerlodge National Forest in 1997. The geographic areas of the former forests are referred to as the Beaverhead or Deerlodge Unit.

Beneficial Uses: Attributes that are considered useful products of the resource. They may include (but are not limited to): recreation, production of salmonid fishes, drinking water, power generation, and irrigation.

Beneficial Effect: A situation that results from a management activity that promotes improvement in stream or habitat conditions, beneficial to fish or other aquatic organisms. Activities that create a short-term impact, but will provide significantly longer benefits will still be classified as a Beneficial Effect. An example might be removal of a culvert that is a movement barrier to fish. Removal may produce sediment over a short period of time, but will provide significant long-term benefits to the fish population.

Best Management Practices (BMPs): A set of practices which, when applied during implementation of a project, ensures that water-related beneficial uses are protected and that State water quality standards are met.

Biological Diversity (or Biodiversity): The variety and abundance of life and processes. It includes all living organisms, the genetic differences among them and the communities and ecosystems in which they occur. Biological diversity also refers to the compositions, structures, and functions of species and habitats and their interactions.

Biological Assessment: A document prepared by or under the direction of the federal agency concerning listed and proposed threatened and endangered species and proposed critical habitat that may be present in the project area and the evaluation of potential effects of the action on such species and habitats.

Biotic: Pertaining to any aspect of living components.

C

CSU: (Controlled Surface Use) A stipulation attached to a lease which allows use and occupancy but requires special operational constraints to protect identified resource values and may modify the lease rights.

Candidate Species: Species identified by the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS), which are considered to be candidates for listing under the Endangered Species Act.

Canopy: The more or less continuous cover of branches and foliage formed collectively by the crowns of adjacent trees and other woody growth. Layers of canopies may be called “stories”.

Capability: The potential of an area to produce resources, supply goods and services, and allow resource uses under an assumed set of management practices and at a given level of management intensity. Capability depends upon current conditions and site conditions such as climate, slope, landform, soils and geology, as well as the application of silvicultural practices or protection from fires, insects, and disease.

Climax: The terminal plant community of a succession; it remains relatively unchanged (dynamic stability) unless the environment changes. Species are capable of reproducing themselves within the community and excluding new species, especially dominant species.

Closure: A route or area is closed to all types of traffic, including foot traffic. This option is seldom used except in emergencies or special situations such as protection of an eagle nesting site (Access and Travel Management - Northern Region Guide, October 1997).

Coarse Woody Debris: Sound and rotting dead woody plant material, standing or fallen, generally greater than 3 inches in diameter. It provides habitat for wildlife and plants and is a source of nutrients and structures for soil protection and development.

Code of Federal Regulations (CFR): The official, legal tabulation, or regulations directing federal government activities.

Commodity: Anything useful or anything bought or sold.

Condition Class: Departure from the historic fire regime, as determined by the number of missed fire return interval – with respect to the historic fire return interval and the current structure and composition of the system resulting form alterations to the disturbance regime. Three classes categorize the current condition with respect to each of five historic Fire Regime Groups. The relative risk of fire-caused loss of key components defines the system increases for each higher number condition. Class 1 level means little or no risk.

Connectivity: The degree to which similar but separated vegetation components of a landscape are connected.

Conservation Strategy: The term also refers to a requirement under Section 7 of the Endangered Species Act for Federal agencies to consult with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service with regard to federal actions that may affect listed threatened species or critical habitat.

Corridor:

Biological Corridor - Landscape elements that connect similar patches of habitat through an area with different characteristics. For example, streamside vegetation may create a corridor of willows and hardwoods between meadows or through a forest.

Utility Corridor – A linear strip of land identified for present or future location of utility rights-of-way within its boundaries.

Cover Type: The present vegetation of an area.

Cover: Vegetation used by wildlife for breeding, and rearing of young, protection from predators, (hiding cover), or to ameliorate conditions of weather (thermal cover).

Cross Country Travel: Wheeled motorized travel off of roads and trails. All roads and trails are identified on an inventory maintained at the Forest Supervisor's Office.

Cultural Resources: The physical remains of human activity (e.g., artifacts, ruins, burial mounds, petroglyphs, etc.) having scientific, prehistoric, or social values.

D

Dead and Dying Stand: A dead and dying stand is defined as a stand where fire or bark beetle infestations are projected to create conditions where it is determined that previously mid or late seral stands will be set back to early seral stage by the disturbance. These types of conditions by dominance type are more fully described below.

This definition does not require all trees within the stand to be dead or dying. The purpose of the definition is to meet the requirements of NFMA Section 4 (d)(1) which provides: "it is the policy of the Congress that all forested lands in the National Forest System shall be maintained in appropriate forest cover with species of trees, degree of stocking, rate of growth, and conditions of stand designed to secure maximum benefits of multiple use sustained yield management in accordance with land management plans."

To meet the NFMA requirement, stands which are reverting to an early seral stage must be managed to maintain appropriate forest cover. Without preparation of a seedbed, and treatment of undesirable fuel levels from the dead trees, the stand may not result in an appropriate tree cover or adequately stocked stand to develop into a mid and late seral stand that contains appropriate forest cover with species of trees, degree of stocking, rate of growth, and conditions of stand to meet multiple use objectives.

Seral stage is the existing vegetation classification definition of stand size, which is determined from the basal area weighted average diameter (Berglund and others, 2008). A stand size between 0.0"-4.9" is considered early seral, from 5.0" – 9.9" is mid seral, and late seral has a stand size of 10.0" and larger.

For Douglas fir:

A Douglas-fir stand is considered dead and dying if stand stocking is expected to be reduced below 60 square feet of basal area due to current and projected mortality from either fire or bark beetles, within a 3 year period. This stand condition is considered a stand in the process of reverting to an early seral successional stage through the initiation of regeneration. This criteria may be modified based on site-specific analysis that indicates the stand would be considered dead and dying even though it does not meet the above criteria because it is determined the stand would revert to an early seral stage due to other factors.- e.g. windthrow.

Determination of tree mortality after a fire includes criteria such as crown scorch, DBH, cambium-kill rating, beetle attack level and interaction of beetle-attach level and DBH. (Hood et al. 2007).

Determination of Douglas-fir tree mortality due to an infestation of Douglas-fir beetle not related to fire includes the following criteria: successfully attacked tree around the entire bole of the tree. (Schmitz 1996, Skovsgaard 1968).

For Lodgepole pine:

Beetle killed: A lodgepole pine stand is considered dead and dying where greater than 50% of the basal area is high hazard for MPB (generally greater than 8 inch in diameter and over 80 years old) and a current within stand infestation of MPB exceeds 10% by basal area, and where a current MPB epidemic is on going within the Forest, (Bollenbacher, Gibson, 1986, Cole 1983). This criteria may be modified based on site-specific analysis that indicates the stand would be considered dead and dying even though it does not meet the above criteria because it is determined the stand would revert to an early seral stage due to other factors.- e.g. windthrow.

Fire killed: A lodgepole pine stand is considered dead and dying if greater than 50% of a stand is killed by fire. This stand condition is considered a stand in the process of reverting to an early seral successional stage through the initiation of regeneration. This criteria may be modified based on site-specific analysis that indicates the stand would be considered dead and dying even though it does not meet the above criteria because it is determined the stand would revert to an early seral stage due to other factors.- e.g. windthrow.

Determination of tree mortality after a fire in lodgepole pine types includes criteria such as crown scorch (Weatherby 2001).

Determination of tree mortality for lodgepole pine tree mortality due to an infestation of mountain pine beetle not related to fire includes the following criteria: successfully attacked tree around the entire bole of the tree (Amman, 1989, Safranyik, 2006).

Deerlodge Unit: The Deerlodge Forest was combined with the Beaverhead Forest in 1997. The former forest is referred to as the Deerlodge Unit.

Decommissioned Road: a road stabilized and restored to a more natural state. Decommissioned roads are not managed as part of the Forest transportation system.

Demographic: Statistics of human populations (size, density, growth, distribution, etc.).

Designated Road, Trail, or Area. A National Forest System road, a National Forest System trail, or an area on National Forest System lands that is designated for motor vehicle use pursuant to 36CFR 212.51 on a motor vehicle use map. (36 CFR 212.1)

Desired Condition (DC): A portrayal of the land, resource, or social and economic conditions that are expected to result in 50-100 years if objectives are achieved. A DC is a vision of the long-term conditions of the land.

Developed Recreation: Recreation that requires facilities and might result in concentrated use of an area; for example, a campground or ski resort.

Dispersed Recreation: Recreation, such as hunting, scenic driving, and backpacking, spread over a large area. Facilities or developments are provided for access and protection of the environment more so than the comfort and convenience of visitors.

Disturbance: Any event, such as wildfire or timber harvest that alters the structure, composition, or function of an ecosystem.

Diversity: The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan.

Dominance Types for the BDNF:

- If the dominance type is single species, the species comprises greater than or equal to 60%.
- If the dominance type is two species, the 1st species comprises roughly 40-80%
- If the dominance type is three species, the 1st species comprises roughly 20-60**%.**
- If no three species can be assigned, the 1st species is a MIX, for BDNF this is either tolerant mix (TASH) or intolerant mix (IMIX).

E

Economics: The study of allocation of limited resources, goods, and services among competing uses.

Ecosystem: A naturally occurring, self-maintained system of varied living and non-living interacting parts that are organized into biophysical and human dimension components.

Ecosystem Integrity: A condition where the parts and functions of an ecosystem are sustained over time and where the system's capacity for self-repair is maintained, such that goals for uses, values, and services of the ecosystem are met.

Ecosystem Management: Scientifically based land and resource management that integrates ecological capabilities with social values and economic relationships, to produce, restore, or sustain ecosystem integrity and desired conditions, uses, products, values, and services over the long term.

Ecosystem Structure: The biological and physical attributes that shape ecological systems. Biotic attributes include: population size, structure, and range, foliage density and layering, snags, large woody debris, or the size, shape, and spatial relationships of cover types within a landscape. Physical attributes include: soil and geologic substrate variables, slope and aspect, or stream gradient.

Encroach: Plant succession in the absence of disturbance, in areas the plant type is not desired.

Eligibility (for Wild and Scenic Rivers): A river is eligible for inclusion in the National Wild and Scenic River System if it is free flowing and has at least one river-related value that is considered outstandingly remarkable.

Endangered Species: Designated by the U.S. Fish and Wildlife Service, and animal or plant that has been given federal protection status because it is in danger of extinction throughout all or a significant portion of its natural range.

Energy Transmission Facility: Pipelines or power lines and associated structures and equipment used to transmit bulk electricity, crude oil, natural gas, refined petroleum products, or hydrogen from generation or collection points to distribution points. Electric transmission lines are generally larger than 66 KV. Transmission facilities do not include smaller distribution lines serving residential or commercial end use. Transmission facilities do not include oil and gas field production, gathering, or collection lines or facilities.

Entrenchment Ratio: Entrenchment describes the relationship of the river to its valley and landform features. Entrenchment is qualitatively defined as the vertical containment of a river and the degree to which it is incised in the valley floor (Kellerhals et al. 1972). The term entrenchment ratio, the vertical containment of the river, has been quantitatively defined (Rosgen 1994) to provide a consistent method for field determination. The entrenchment ratio is the ratio of the width of the flood-prone area to the surface width of the bankfull channel. Ratios of 1-1.4 represent entrenched streams; 1.41-2.2 represent moderately entrenched streams; and ratios great than 2.2 indicate rivers only slightly entrenched, (Rosgen, 1996)

Environmental Impact Statement (EIS): A detailed statement prepared by the responsible official for a major federal action, which significantly affects the quality of the human environment. Alternatives to the proposed action are provided, and effects analyzed.

Even-Aged Management: The application of a combination of actions that results in the creation of stands in which trees of essentially the same age grow together. Clearcut, shelterwood, or seed tree cutting produce even-aged stands of essentially the same age.

Extent of Concern: The portion of a travel route for which a Scenic Concern Level has been assigned. The extent of concern for sites is not listed, but can be described as the perimeter of developed or heavily used areas. The extent of concern provides the general location for project analysis viewpoints and visibility mapping.

F

Facilities: Picnic tables, toilets, hardened campsites, campground, other buildings or structures.

Fire-Dependent Ecosystem: Forests, grasslands, and other ecosystems historically composed of species that evolved with and are maintained by periodic fire.

Fire Frequency or Return Interval: How often fire burns a given area; often expressed in terms of fire return intervals. For example, a site might burn over every 5 to 15 years.

Fire Intensity: Expression used to describe the power of wildland fires. More commonly described as the rate of energy release per unit length of the fire front.

Fire-Prone Ecosystem: Ecosystems that historically burned intensely at low frequencies (stand replacing fires), burned at a high frequency (understory fires), or burned infrequently historically, but – because of changed conditions-now experience more frequent fire events.

Fire Regime Group: A generalized description of the role fire plays in an ecosystem. It is characterized by fire frequency, predictability, intensity, seasonality, duration and scale (patch size), as well as regularity or variability.

Fire Risk: The chance that a fire will ignite as affected by the nature and incidence of causative agents.

Fire Severity: A qualitative measure of the fire's immediate effects on the ecosystem. Relates to the extent of morality and survival of plant and animal life-both above and below ground-and to loss of organic matter.

Fire Terms:

Fire Use – "Use of Wildland Fire" or "Fire Use" describes the two types of wildland fire to provide resource benefits; prescribed fire and wildland fire use

Prescribed Fire – Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.

Wildfire – An unplanned, unwanted wildland fire, including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.

Wildland Fire – Any non-structure fire, that occurs in the wildland. Three distinct types of wildland fire have been defined and include wildfire, wildland fire us and prescribed fire.

Wildland Fire Use – The application of the appropriate management response to naturally ignited wildland fires to accomplish specific resource management objectives in predefined designated areas outlined in Fire Management Plans.

Fishery: The total population of fish in a stream or body of water and the physical, chemical, and biological factors affecting that population.

Fladry: An east European term for a simple string of closely spaced strips of cloth used to deter wolves. Ideally, the strips of cloth should be 10 centimeters (4 inches) wide by 50 centimeters (20 inches) long, set less than 50 centimeters apart, and just touch the ground. When the flags are too far apart or the string is too high off the ground, wolves are likely to slip through.

Flora: The plant life characteristic of a region, period, or special environment.

Forage: Plant material (usually grasses, forbs, and brush) that is available for animal consumption.

Forest Plan: A document that provides strategic direction by goals and objectives for management of a National Forest developed through agency and public involvement

Forest Products: Any products from national forest system lands that requires a permit to collect such as sawlogs, pulpwood, poles, posts, and firewood, mushrooms, berries, beargrass for floral arrangements, etc.

Forest Road: As defined in Title 23, Section 101 of the United States Code (23 U.S.C. 101), any road wholly or partly within, or adjacent to, and serving the National Forest System and which is necessary for the protection, administration, and utilization of the National Forest System and the use and development of its resources (FSM 7705 – Transportation System). Also see Road..

Forest Transportation Atlas: A display of the system of roads, trails and airfields of an administrative unit (36 CFR 212.1).

Forest Transportation Facility: A forest road or trail or an airfield that is displayed in a forest transportation atlas, including bridges, culverts, parking lots, marine access facilities, safety devices, and other improvements appurtenant to the forest transportation system. (36 CFR 212.1)

Forested Watershed: A watershed where 90% or more of a watershed is forested.

Fuel Management: Manipulation or reduction of fuels to meet forest protection and management objectives while preserving and enhancing environmental quality.

Fuel Treatment: The rearrangement or disposal of fuels to reduce the fire hazard.

G

Game Species: Any species of wildlife or fish for which seasons and bag limits have been prescribed, and which are normally harvested by hunters, trappers, and fisherman under State or federal laws, codes, and regulations.

Geographic Information System (GIS): A computer system that stores and uses spatial data.

Goal: A concise statement that describes a desired condition to be achieved sometime in the future, normally expressed in broad, general terms and is timeless in that it has not specific date by which it is to be completed. Goal statements form the principal basis form which objectives are developed.

Goods and Services: The various outputs produced by forest and rangeland renewable resources. The tangible and intangible values of which are expressed in market and non-market terms.

H

Habitat: The place where a plant or animal lives and grows under natural conditions.

Habitat Type: An aggregation of all land areas potentially capable of producing similar plant communities at the climax phase of succession.

Hazardous Fuel: Excessive live or dead wildland fuel accumulations that increase the potential for uncharacteristically intense wildland fire and decrease the capability to protect life, property, and natural resources.

Historical Range of Variability (HRV): The natural fluctuation of components of healthy ecosystems over time. In this EIS, refers to the range of conditions and processes that are likely to have occurred prior to settlement of the project area by people of European descent (approximately the mid-1800's), which would have varied within certain limits over time.

(HUC) Hydrologic Unit Code: A coding system developed by the U.S. Geological Service to map geographic boundaries of watersheds by size. For example, the Columbia River Watersheds is 1st code, the Clarkfork River a 3rd code, the Beaverhead River a 5th code, and Mussigbrod Creek a 6th code HUC. The BDNF has mostly 6th code HUCs.

I

Indicators: A measure of, or surrogate for the elements of ecosystem management.

INFISH (Inland Native Fish Strategy): On July 31, 1995, the Decision Notice for Inland Native Fish Strategy (INFISH) Environmental Assessment was signed. This strategy was developed to provide interim direction to protect habitat and populations of native resident fish until longer-term conservation strategies such as the Upper Columbia River Basin and federal recovery plans replaced it.

Inholding: Private land or patented mining claims that lie within National Forest land.

Intactness: Untouched or unaltered, especially by anything that harms or diminishes its character.

Integrated Pest Management: A pest management approach that uses prevention techniques, early detection, diagnosis and treatment of pest organisms in cooperation and coordination with other agencies and organizations to control or eradicate invasive species. Treatment uses cost effective methods that minimize adverse effects to non-target species. Examples:

Cultural - Silvicultural prescriptions, change of crop species

Mechanical - Fire, cultivation, pruning, trapping

Biological - use of parasites, predators, or disease

Genetic - use of resistant species or cultivars

Chemical - use of insecticides, herbicides, fungicides, etc

Interim Roads and Trails Inventory GIS Layer: The information on page 53 (Interim Road and Trail Map) represents the GIS layer used to identify open motorized roads and trails until site-specific travel planning takes place. This is an interim map eventually replaced by the BDNF Motorized Use Visitors Map.

Inventoried Roadless Area: See Areas Evaluated for Potential Wilderness.

J

K

Key Watershed: One or both of the following types of watershed designations

Fish Key Watersheds: Watersheds selected for focusing of federal funds and personnel for the purpose of protecting, restoring, or maintaining viability of Threatened, Endangered and Sensitive aquatic species.

Restoration Key Watersheds: Watersheds selected for focusing of federal funds and personnel for the purpose of accelerating improvements in water quality and watershed conditions.

L

Lands Where Timber Harvest is *Not* Allowed: The acres identified as BDNF system lands that meet the criteria outlined in the timber harvest protocol in the forest plan.

Lands Where Timber Harvest *is* Allowed: The acres that may not be suitable, but harvest is used to achieve other resource objectives as described in the timber protocol.

Lands Suitable for Timber Production: The acres designated for growth and yield of timber products. These are the acres left over after the first two steps (listed above) of the timber protocol have been applied.

Landscape: An area composed of interacting ecosystems repeated because of geology, landforms, soils, climate, biota and human influences throughout. Landscapes are generally a size, shape, and pattern determined by interacting ecosystems.

Landscape Character: Particular attributes, qualities, and traits of a landscape that give it an image and make it identifiable or unique.

Landscape Visibility: Accessibility of the landscape to viewers, referring to one's ability to see and perceive landscapes.

Linkage: Route that permits movement of individual plants (by dispersal) and animals from a Landscape Unit and/or habitat type to another similar Landscape Unit and/or habitat type.

Long-Term-Sustained-Yield Timber Capacity: The highest uniform wood yield from lands being managed for timber production that may be sustained under specified management intensity consistent with multiple-use objectives

M

Management Activity: Activity humans impose on a landscape for the purpose of managing natural resources.

Management Area: A land area with similar management goals and a common prescription, as described in the forest plan.

Management Indicator Species (MIS): "Certain vertebrate and/or invertebrate species present in the area . . . selected because their populations changes are believed to indicate the effects of management activities. . . additional plant or animal species selected because their population changes are believed to indicate effects of management activities on other species of selected major biological communities or on water quality." (CFR 219.19(a) (1). Designation does not infer a special degree of protection in and of itself.

Mineral Classifications

Common Variety: Includes common materials for building and commerce such as sand, gravel, building stone, fill material, and commodities such as sand, peat, inert fillers and abrasives. It does not include deposits of mineral materials which are valuable because of some property giving them distinct and special value or covered in the mineral leasing laws. If it is not locatable or leasable, it is salable. The terms "common variety," "salable" and " mineral materials" are used interchangeably in this document.

Leasable Minerals (FSM 2822.11,.12): Through the 1920 Mineral Leasing Acts, Congress made mineral deposits that occur in relatively extensive deposits and involve relatively large areas leasable, rather than locatable. Leasable minerals include public domain status and acquired federally owned deposits of hydrocarbons (oil and gas, oil shale, tar sands, etc.), coal, geothermal, phosphate, sodium, and, on public domain land in LA and NM, sulfur. On lands with acquired minerals all non-common variety minerals are leasable per the 1947 Act.

Locatable Minerals (FSM 2811.1,.2): These minerals are found on all national forests and lands which; 1.) Were public domain lands subject to location and entry under the US mining laws; 2.) Have not been appropriated, withdrawn, or segregated from location in entry; and 3.) Have been or may be shown to be mineral lands that are open for prospecting for locatable or hard rock minerals. Locatable minerals may include any solid, natural, inorganic substances, occurring in the crust of the earth such as "gold, silver, cinnabar, lead, tin, copper, or other valuable deposits." Locatable minerals are not the common varieties of mineral materials or leasable minerals. They may include certain non-metallic minerals and uncommon varieties of mineral materials.

Mineral Materials: Includes minerals of widespread occurrence, like building materials, plain clay and limestone, used for ordinary purposes. Commodities such as sand, stone, gravel, pumice, pumicite, clay, cinders, and petrified wood are included. The terms "common variety, salable, and mineral materials" are used interchangeably in this document.

Salable: Mineral materials which consist of petrified wood and common varieties of sand, gravel, stone, pumice, pumicite, cinders, clay and other similar materials. Such mineral materials include deposits used for agriculture, animal husbandry, building, abrasion, construction, landscaping, and similar uses. The terms "common variety, salable, and mineral materials" are used interchangeably in this document.

Mitigation: Actions to avoid, minimize, reduce, eliminate, replace, or rectify the impact of a management practice.

Monitoring: The process of collecting information to evaluate if objectives and anticipate results of a management plan are being realized, or if implementation is proceeding as planned.

Motor Vehicle: Any vehicle which is self-propelled, other than:

1) A vehicle operated on rails; and

2) Any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area. (36 CFR 212.1; 36 CFR 261.2; FSM 2353.05)

Motor Vehicle Use Map. A map reflecting designated roads, trails, and areas on an administrative unit or a Ranger District of the National Forest System. (36 CFR 212.1)

Multiple Use: The management of all the various renewable surface resources of the National Forest System so that they are used in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or relate services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some lands will be used for less than all of the resources and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

Municipal Watershed: A watershed that contains a community water system or a stream feeding such a system. Montana Code Annotated 75-6-1-2 defines community water system as a public water supply system that serves at least 15 service connections used by year-round residents or that regularly serves at least 25 year-round residents.

N

National Forest Management Act (NFMA): A law passed in 1976 as amendments to the Forest and Rangeland Renewable Resources Planning Act that requires the preparation of regional and forest plans and the preparation of regulations to guide that development.

National Environmental Policy Act (NEPA): The National Environmental Policy Act of 1969, requires environmental analysis and public disclosure of federal actions.

National Forest Scenic Byway: A road on National Forest System Land that has been designated by the Chief of the Forest Service for its exceptional scenic, historic, cultural, recreational, or natural resources.

National Forest System Road: A forest road other than a road which has been authorized by a legally documented right-of-way held by a state, county, or other local public road authority. (36 CFR 212.1; 36 CFR 251.51; 36 CFR 261.2)

Natural Appearing Landscape Character: Landscape character resulting from human activities, yet appears natural, such as historic conversion of native forests into farmlands, pastures, and hedgerows that have reverted back to forests through reforestation activity or natural regeneration.

O

Objective - A concise, time-specific statement of measurable planned results that respond to pre-established goals. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving identified goals (36 CFR 219.3).

Occupied Grizzly Bear Habitat: Areas where there is high likelihood person will encounter a grizzly bear with her cubs of the year.

Occupied mapped Lynx Habitat: All mapped lynx habitat on an entire national forest is considered "occupied" by lynx when:

1-There are at least 2 verified lynx observations or records since 1999 on the national forest unless they are verified to be transient individuals; or

2-There is evidence of lynx reproduction (dens) on the national forest.

Off-Highway Vehicle (OHV). Any motorized vehicle designed for or capable of cross-county travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain. (36 CFR 212.1; FSM 2353.05)

Old Growth: The definition of Old Growth as found in Green, et. al., Old-Growth Forest Types of the Northern Region, R-1 SES 4/92: USDA Forest Service, Northern Region, Missoula, MT 59807.

Open Motorized Road and Trail Density (OMRTD): A measurement of motorized routes open to use, measured at the completion of project implementation in miles per square mile. It consists of motorized roads and trails that fall within the external forest boundary and are (1) open to public motorized use, (2) open for permitted and/or administrative use and remain on the landscape, (3) temporary unless obliterated at project completion, and (4) motorized routes on private inholdings.

Outstandingly Remarkable Value: Characteristic of a river segment that is judged to be a rare, unique, or exemplary feature that is significant at a regional or natural scale. Values can be recreational, scenic, geological, historical, cultural, biological, botanical, ecological, heritage, hydrological, paleontological, scientific, or research-related.

P

PSU Dominance Type:

If the dominance type is single species; the species comprises >= 60%,
If dominance type is 2 species, the 1st species comprises roughly 80-40%,
If the dominance type is 3 species, the 1st species comprises roughly 60-20%
If no 3 species can be assigned, the 1st species is a MIX, For the BDNF this is either tolerant mix (TASH), or intolerant mix (IMXS)

Pastoral Landscape Character: Landscape character that is the result of human activities, containing positive cultural elements such as historic conversion of native forests into farmlands, pastures, and hedgerows, plus some remnants of native forests.

Pattern: The spatial arrangement of landscape elements (patches, corridors, matrix) that determines the function of a landscape as an ecological system.

Play: A known or possible accumulation of oil or gas sharing similar geologic properties.

Prescribed Fire: Any fire ignited by management action to meet specific objectives. All prescribed fires are conducted in accordance with prescribed fire plans.

Properly Functioning Condition (PFC): Ecosystems are in PFC when they function within their historic range of variability.

Proposed Action: A project or set of activities that a federal agency intends to implement, as defined in NEPA regulations.

Public Involvement: Any process designed to broaden the information base upon which agency decisions are made by informing the public about Forest Service activities, plans, and decisions to encourage public understanding about and participation in the planning processes which lead to final decision-making.

Q

R

Rangeland: Land on which the potential natural plant community is predominantly grass, grass-like plants, forbs, or shrubs suitable for grazing and browsing.

Reach: A segment of stream. Segment length will vary based on resource values being considered. For example, if trout over-wintering habitat is a consideration for analysis and over-wintering pools are confined to ¼ mile of stream; the reach analyzed for fisheries may be defined as ¼ mile. Similarly, if hydrologic function of the channel is being evaluated on a stream with 1.5 miles of the same type of channel conditions, the reach analyzed for hydrology may be 1.5 miles.

Recreation Allocations:

- In Summer

Backcountry: *Semi-primitive motorized* recreation settings are provided, and offer opportunities for varied types of travel (see table below) and recreational activities.

Non-Motorized: Semi-primitive non-motorized recreation settings offer opportunities for mountain biking, horse and stock travel, hiking, dispersed camping, and other activities. These allocations are intended to provide secure wildlife habitat especially in areas which link landscapes. They also offer quiet summer and fall recreation opportunities and desirable semi-primitive settings.

Recommended Wilderness: *Semi-primitive non-motorized* settings are provided, and offer opportunities for foot, stock, ski, snowshoe travel, dispersed camping, and other activities.

Road-based: Roaded natural and rural recreation settings are provided, and offer a wide variety of opportunities for dispersed and developed recreational activities.

Wilderness: *Primitive and semi-primitive non-motorized* settings are provided, and offer opportunities for foot, stock, ski, snowshoe travel, dispersed camping, and other activities allowed in Wilderness. *These lands, designated as Wilderness by Congress, are the same in all alternatives.*

Wilderness Study Area: *Semi-primitive non-motorized and semi-primitive motorized* settings are provided. Some opportunities are available for wheeled motorized travel on routes as shown on the travel plan and non-motorized travel is available yearlong.

- In Winter

Motorized Recreation: Roaded and *semi-primitive* motorized recreation settings are provided in these areas, and offer opportunities for a variety of motorized and non-motorized travel and activities. The majority of these allocations provide opportunities for snowmobile travel (Table 9, page 30).

Non-Motorized : Primitive and semi-primitive non-motorized recreation settings are provided in these areas, and offer opportunities for ski touring, snowshoeing, and hiking, and other non-motorized activities. These allocations are intended to protect low elevation winter range for deer, elk, and moose; protect high elevation secure habitat for mountain goat and wolverine and to provide quiet winter recreation opportunities in accessible locations.

Recommended Wilderness Motorized: *In Alternative 1, motorized travel is allowed as shown in the travel plan.*

Recommended Wilderness: *Semi-primitive non-motorized* settings are provided, and offer opportunities for foot, stock, ski, snowshoe travel, dispersed camping, and other activities.

Wilderness: *Primitive and semi-primitive non-motorized* settings are provided, and offer opportunities for foot, stock, ski, snowshoe travel, dispersed camping, and other activities allowed in Wilderness. These lands, designated as Wilderness by Congress, are the same in all alternatives.

Wilderness Study Area: *Semi-primitive non-motorized and semi-primitive motorized* settings are provided, and offer opportunities for wheeled motorized travel on routes as shown on the travel plan. These areas also offer opportunities for snowmobiling December 2 through May 15, and some non-motorized travel in all seasons.

Recreation Opportunity Spectrum (ROS): A framework for stratifying and defining classes of outdoor recreation environments, activities, and experience opportunities. The settings, activities, and opportunities for obtaining experiences are arranged along a continuum or spectrum divided into six classes—primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural and urban.

Primitive (PRIM) - Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other area users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Motorized use within the area is not permitted.

Semi-Primitive Non-Motorized (SPNM) - Areas characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but is subtle. Motorized uses not permitted, include airplanes, helicopters, hovercraft, etc.

Semi-Primitive Motorized (SPM) - Areas characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other area users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but is subtle. Motorized use is permitted.

Roaded Natural - Area is characterized by predominatntly natural appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural enveronment. Conventional motorized use is provided for in constru8ction standards and design of facilities.

Rural – Area is characterized by substantially modified natrual environment. Sights and sounds of humans are readily evidetn and interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people.

Urban – Area is characterized by a substantially urbanized environment, although the background may have natural –appearing elements. Vegetative cover is often exotic and manicured. Sights and sounds of humans on-site, are predominant. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

Recreation Types:

Developed - The type of recreation that occurs where modifications (i.e., improvements) enhance recreation activities in a defined area.

Dispersed - The type of recreation use related to and in conjunction with roads and trails that requires few if any improvements and may occur over a wide area. Activities tend to be day-use and include hunting, fishing, berry picking, off-road vehicle use, hiking, horseback riding, picnicking, camping, viewing scenery, snowmobiling, and many others.

Recreation Use:

LOW: 0 to 20 people per day,

MODERATE: 20 to 40 people per day,

HIGH: Over 40 people per day.

Reference Landscapes: These are terrestrial and aquatic areas with high ecosystem integrity and within the historical range of variability. They are of sufficient size, where relevant disturbance and ecological processes occur, and are generally unaffected by human activities.

Research Natural Area: An area that illustrates or typifies for research or educational purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance (36 CFR 1251.23).

Resiliency: The capacity of forests and grassland/shrublands to return to prior conditions after disturbance. Resilient forests are those that not only accommodate gradual changes related to climate but tend to return toward a prior condition after disturbance either naturally or with management assistance. (Millar et. al, 2007) Within the BDNF, maintaining a diversity of tree species or dominance types, age or size class diversity within dominance types, and forest density similar to what historic disturbance regimes produced, are considered underpinnings of a resilient forest.

Restriction: A restriction precludes use of the route or area during a specified time period by: 1) Type of vehicle; 2) Type of traffic (Access and Travel Management - Northern Region Guide, October 1997).

Retard: To slow rate of recovery below the near natural rate of recovery if no additional human caused disturbance was placed on the system.

Riparian Areas/Habitats: Land where the vegetation and microclimate are influenced by perennial and/or intermittent water.

Riparian Conservation Area (RCA): As established by the Inland Native Fish Strategy, RCAs are portions of watersheds where riparian-dependent resources receive primary emphasis and management activities are subject to specific standards and guidelines. Examples include traditional riparian corridors, wetlands, intermittent streams, and other areas that help maintain the integrity of aquatic ecosystems. The following categories describe RCAs unless developed and documented through a watershed or site specific analysis.

Category 1 – Fish bearing streams: RCAs consist of the stream and the area on either side of the steam extending from the edge of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edge of the riparian vegetation, or to the a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet including both sides of the stream channel), whichever is greatest.

Category 2 – Permanently flowing non-fish bearing streams: RCAs consist of the stream and the area on either side of the steam extending from the edge of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to the outer edge of the riparian vegetation, or to the a distance equal to the height of one site-potential trees, or 150 feet slope distance (300 feet including both sides of the stream channel), whichever is greatest.

Category 3 - Ponds, lakes, reservoirs, and wetlands greater than 1 acre: RCAs consist of the body of water or wetland and the area to the outer, edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the extent of moderately and highly unstable areas, or to the a distance equal to the height of one site-potential trees, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond, or lake, whichever is greatest.

Category 4 - Seasonally flowing or intermittent streams, wetlands less than 1 acre, landslides, and landslide-prone areas: This category includes features with high variability in size and site-specific characteristics. At a minimum the RCAs must include:

a. The extent of landsides and landslide-prone areas,

b. The intermittent stream channel and the area to the top of the inner gorge,

c. The intermittent stream channel or wetland and the area to the outer edge of the riparian vegetation,

d. For Fish Conservation Watersheds, the area from the edges of the stream channel, wetland, landslide, or landslide-prone area to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.

e. For watersheds not identified as Fish Emphasis Key Watersheds, the area from the edges of the stream channel, wetland, landslide, landslide-

prone area to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, whichever is greatest.

Riparian Management Objective (RMO): Fish habitat objectives established for habitat attributes such as pool frequency, large woody debris, bank stability, bank angle, entrenchment ratio, fine sediment levels, water temperature, and width-to-depth ratio to achieve properly functioning condition in streams.

Road: A motor vehicle route over 50 inches wide, unless identified and managed as a trail. (36 CFR 212.1)

Road Maintenance: The ongoing upkeep of a road necessary to retain or restore the road to the approved road management objective (FSM 7705 – Transportation System).

Road Management Objectives: Defines the intended purpose of an individual road based on management area direction and access management objectives. Road management objectives contain design criteria, operation criteria, and maintenance criteria (FSH 7709.55, Sec 33 – Transportation Planning Handbook).

Route: A road or trail as defined in this section.

Rural/Agricultural Landscape Character: The result of extensive human activities, such as, conversion of native landscapes into extensively cultivated farmland, vineyards, pastures, or intensive livestock production.

S

Salmonids: Members of the family of elongate soft-finned fishes Salmonidae - the trout and salmon family.

Scale: Defined in the framework as geographic extent; for example, region, sub-regional or landscape scale.

Scenery: General appearance of a place, general appearance of a landscape, or features of a landscape.

Scenery Management: The art and science of arranging, planning, and designing landscape attributes relative to the appearance of places and expanses in outdoor settings.

Scenic Attractiveness: The scenic importance of a landscape based on human perceptions of the intrinsic beauty of landform, rock form, water form, and vegetation pattern. Reflects varying visual perception attributes of variety, unity, vividness, intactness, coherence, mystery, uniqueness, harmony, balance, and pattern. Attractiveness is classified as: A) Distinctive, B) Typical or Common, C) Undistinguished.

Scenic Concern Level –Public value and importance of views. See Agricultural Handbook No. 701, Chapter 4 to further define concern levels and their use to map landscape visibility and establish Scenic Integrity Objectives. **Concern Level 1:** A travel route or site where use is high, and/or concern for the scenery is high. **Concern**

Level 2: A travel route or site where use is low or moderate, and/or concern for the scenery is moderate.

Scenic Integrity: State of naturalness or, conversely, the state of disturbance created by human activities or alteration. Integrity is stated in degree of deviation from the existing landscape character in a national forest as follows.

Very High – Generally provides for ecological change only.

High – Human activities are not visually evident. Activities may only repeat attributes of form, line, color, and texture found in the existing attributes, qualities or traits of a landscape that give it an image and make it identifiable or unique.

Moderate - Human activities must remain visually subordinate to the attributes of the existing landscape character. They may repeat form, line, color or texture common to these characters but changes in quality size, number intensity etc. must remain visually subordinate to the attributes, qualities or traits of a landscape that give it an image and make it identifiable or unique.

Low – Human activities of vegetative and landform alterations may dominate the original, natural landscape character but should appear as natural occurrences when viewed at background distances.

Scenic Quality: The essential attributes of landscape that when viewed by people, elicit psychological and physiological benefits to individuals and therefore, to society in general.

Scenic Resource: Attributes, characteristics, and features of landscapes that provide varying responses from and degrees of benefits to humans.

Secure Areas: Areas larger than 10 acres that are1/3 of a mile from a route open to motorized vehicles.

Sensitive Species: Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by: a) Significant current or predicted downward trends in population numbers or density or, b) Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution. Forest Service sensitive species are not “listed” under the Endangered Species Act (ESA) and may not occur on all the forests within a Forest Service Region. Regional sensitive species lists undergo periodic review and are subject to change. G rankings denote global (range-wide) and state status from 1 (critically imperiled) to 5 (demonstrably secure)

Seral Stage: The series of plant community conditions that develop during ecological succession from bare ground (or major disturbance) to the climax stage. *Early seral stage* is a condition in which plants are present soon after a disturbance or at the beginning of a new successional process (seedling or saplings in a forest). Grass, herbs, or brush are abundant, diversity is high. A *mid-seral stage* is characterized in a forest setting has almost full crown closure in pole-to medium-sized trees. Understory vegetation and species diversity is less due to tree shading. A *late seral stage* is a condition with mature trees, often of old forest character. Tree growth has slowed,

mortality has increased, understory forage is minimal, structural diversity may be high, and species diversity is generally less.

Short Interval Fire-Adapted Ecosystems: Those plant and animal communities that depend on frequently occurring wildland fires to cycle nutrients, control pathogens, maintain species composition, population, and distribution in healthy resilient condition across broad landscapes.

Ski Touring: Includes all types of backcountry skiing from cross country with a focus on covering terrain, seeing the sights and being away from well traveled routes to climbing snow covered mountains to ski downhill. It does not include lift-assisted skiing.

Snowmobile: A motorized vehicle capable of use over snow or ice driven by a combination of cleats, belts, tracks, and skis.

Soil Classification: Systematic arrangement of soils into groups or categories on the basis of their characteristics; the USDA soil classification system divided from Orders to Suborders, Great Groups, Subgroups, Family, and Type or Series Naming convention at the upper levels is based on Greek and Latin root words; at the series level naming is based on geographic place names.

Soil Function: Primary soil functions are: (1) the sustenance of biological activity, diversity, and productivity, (2) soil hydrologic function, (3) filtering, buffering, immobilizing, and detoxifying organic materials, and (4) storing and cycling nutrients and other materials.

Special Interest Area: An area important for cultural, biological, or geological features or values.

Special-Use Authorization: A permit, lease, or easement that authorizes the use or occupancy of National Forest System lands for certain purposes other than grazing, forest products, or minerals (36 CFR 251.51).

Species: A unit of classification of plants and animals consisting of the largest and most inclusive array of sexually reproducing and cross-fertilizing individuals, which share a common gene pool.

Species Viability: A species consisting of self-sustaining and interacting populations that are well distributed through the species' range. Self-sustaining populations are those that are sufficiently abundant and have sufficient genetic diversity to display the array of life history strategies and forms to provide high likelihood for their long-term persistence and adaptability over time.

Stand: A community of trees or other vegetation uniform in composition, constitution, spatial arrangement, or condition to be distinguishable from adjacent communities.

Stand Composition: The representation of tree species in a forest stand, expressed by some measure of dominance (i.e., % volume, number, basal area).

Standard: A particular action, level of performance, or threshold specified by the forest plan for resource protection or accomplishment of management objectives. Unlike "guidelines" which are optional, standards are mandatory. Standards are applied to management actions as mitigation; they do not initiate management actions.

Stream Channel Stability: A classification system that uses visual estimates of various channel, bank, and riparian area.

Stream Order: 1st order stream is a headwater stream. A 3rd order stream is the third branch from the 1st order stream.

Subpopulation: A geographically distinct segment of a larger population.

Succession: The replacement in time of one plant community with another. The prior plant community (or successional stage) creates conditions that are favorable for the establishment of the next stage.

Successional Stage: A stage or recognizable condition of a plant community, which occurs during its development from bare ground to climax.

Suitability for Wild and Scenic Rivers: Evaluation of eligible rivers for inclusion into the national Wild and Scenic River System by determining the best use of the river corridor and the best method to protect the outstandingly remarkable values within the river corridor.

Summer: Season of use is May 16 through December 1.

Summer Backcountry: *Semi-primitive motorized* recreation settings (See ROS).

Sustainability: The ability to maintain a desired condition or flow of benefits over time.

T

TES: Threatened, endangered and sensitive species (TES).

Temporal: Related to time.

Temporary Road or Trail. A road or trail necessary for emergency operations or authorized by contract, permit, lease, or other written authorization that is not a forest road or trail and that is not included in a forest transportation atlas. (36 CFR 212.1)

Terrestrial: Pertaining to the land.

Threatened Species: A U.S. Fish and Wildlife Service designation of a plant or animal species likely to become endangered throughout all or a specific portion of its range within the foreseeable future.

Timber Harvest: Timber harvest is an activity or tool by which trees are removed for numerous management purposes, one of which may be timber production.

Timber Production: The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use.

Total Maximum Daily Loads (TMDL): The total amount of a pollutant that a water body may receive from all sources without exceeding water quality standards (MTDEQ).

Traditional Cultural Property: An site eligible for listing in the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that are rooted in that community's history and are important in maintaining the continued cultural identify of the community.

Trail: A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail. (36 CFR 212.1; FSM 2353.05)

U

Unsuitable for Timber Production - Lands which meet at least one of the 10 exceptions listed under "suitable for timber production."

Uncharacteristic Wildfire Effects: An increase in wildfire size, severity and resistance to control, and the associated impact to people and property, compared to that which occurred in the native system.

Understory: Vegetation (e.g., trees or shrubs) growing under the canopy formed by taller trees.

Uneven-aged Management: The application of a combination of actions needed to simultaneously maintain continuous high-forest cover, recurring regeneration of desirable species, and the growth and development of trees through a range of diameter or age classes to provide a sustained yield of forest products. Cutting methods to develop and maintain uneven-aged stands are single tree and group selection.

Unique Habitat: Areas, usually small in size, that provide life requirements of plant or animal species that are not met on the general landscape: examples include vernal pools, snow beds, cliffs, talus slopes, seeps, fens, bogs, hummocks, solifluction lobes, caves, etc.

Unsuitable Range: Land that should not be grazed by livestock because of unstable soils, steep topography, or inherent low potential for forage production.

Uncharacteristic Wildfire Effects: An increase in wildfire size, severity and resistance to control, and the associated impact to people and property, compared to that which occurred in the native system.

Unwanted Wildfire: Fire that burns more intensely than the natural or historical range of variability, thereby fundamentally degrading the ecosystem or destroying communities or rare or threatened species/habitat. Also known as catastrophic, severe, uncharacteristically severe, or damaging.

Utility Corridor: Designated right-of-way corridor (FSM 1905)

V

Vacant Allotment: An allotment not stocked with permitted livestock.

Viable Population: A population, which has the estimated numbers and distribution of reproductive individuals to insure continued existence well distributed in the planning area. To insure that viable populations will be maintained, habitat must be provided to support, at least, a minimum number of reproductive individuals and that habitat must be well distributed so that those individuals can interact with others in the planning area.

Viewshed: Total visible area from a single observer position, or the total visible area from multiple observer positions. Viewsheds are accumulated seen-areas from highways, trails, campgrounds, towns, cities, or other viewer locations. Examples are corridor, feature, or basin viewsheds.

W

Watershed: An area of land with a characteristic drainage network that contributes surface or ground water to the flow at that point; a drainage basin or a major subdivision of a drainage basin.

Watershed Analysis: Watershed analysis is a systematic procedure for characterizing watershed and ecological processes to meet specific management and social objectives (Ecosystem Analysis at the Watershed Scale, Federal Guide for Watershed Analysis 1995). This information may then be used to:

- determine changes in Riparian Management Objectives,
- identify and prioritize restoration activities within the watershed,
- identify management activities that are consistent with the processes that create and maintain high quality aquatic habitats, and
- reveal the most useful indicators for monitoring environmental change.

In brief, watershed analysis is a set of technically rigorous and defensible procedures designed to provide information on what processes are active within a watershed (6^{th} code), how those processes are distributed in time and space, what the current upland and riparian conditions of the watershed are, and how all of these factors influence riparian habitat and other beneficial uses. The analysis is conducted by an interdisciplinary team.

Watershed Assessment: See Watershed Analysis.

Water Yield: The measured output of forest streams.

Well Distributed: Habitat is distributed over the entire forest, based on measurements by landscape. The intent is to achieve long-term objectives by not lumping habitat into one or a few areas; thereby increasing the risk of adverse effects from a single event. Well distributed will be evaluated by examining a particular condition or habitat for each landscape unless stated otherwise.

Wetlands: Those areas that are inundated by surface or ground water with a frequency sufficient, under normal circumstances, to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands include marshes, bogs, sloughs, potholes, river overflows, mud flats, wet meadows, seeps, and springs.

Wilderness Areas: Areas that are without developed and maintained roads, and that are substantially natural, and that Congress has designated as part of the National Wilderness Preservation System.

Wilderness Study Area: Those areas required for study of Wilderness suitability under the Montana Wilderness Study Act of 1977 (Public Law 95-150).

Wildland(s): These lands are largely undeveloped in character and natural appearing, especially when compared to nearby privately owned lands near towns, cities, industrial, commercial, agricultural and rural landscapes. Forest Service wildland is publicly owned and administered under laws of the U.S. Congress for a variety of purposes.

Wildland Fire Use: The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in predefined geographic areas outlined in Fire Management Plans.

Wildland-Urban Interface: The line, area, or zone, where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuel.

Winter: Season of use is December 2 through May 15.

Wireless Telecommunication Facilities: Buildings, towers, or other physical improvements used to house or support wireless communication equipment and operations.

X

Xeric: A dry environment, characterized by plants that require very little moisture.

Y & Z

No defined terms

APPENDIX A - SCENIC RESOURCE INVENTORIES

The following information is available at the Supervisor's Office in Dillon, MT, and serves to develop a forestwide Scenic Integrity Objective Map based on the matrix in the Scenic Resources section of the plan. This information applies to site-specific project analysis.

Scenic Attractiveness

A Forest wide Scenic Attractiveness layer is available in the GIS database, and will be used to map SIOs.

Landscape Visibility Mapping

Landscape visibility mapping involves consideration of categories of concern levels. The general categories are listed first in this section and the BDNF concern level list follows identifying specific routes and sites of concern**.**

Concern Level One:

Paved highway sections across and within 15 miles of the Forest boundary, includes Interstates, Federal and State highways, forest and county roads and other jurisdictions.

All designated National Historic, Scenic, and Recreation trails, National Scenic and Backcountry Byways, National Landmarks and Historic Sites.

All National Forest Campgrounds

All State Parks and Campground

All incorporated towns

All eligible Wild, Scenic, and Recreation rivers

Developed Campgrounds and Recreation Resorts

Concern Level Two

All Forest Service Trailheads

Forest Service Cabins and Administrative Sites

The following are routes and sites identified for mapping minimum Scenic Integrity Levels according to the Scenic Integrity Matrix.

Concern Level List

Big Hole Landscape: Butte, Dillon, Wisdom, and Wise River Ranger Districts		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 15	Melrose to Rocker
	State Highway 278	Badger Pass to Wisdom
	State Highway 43	Interstate 15 to Chief Joseph Pass
	County Highway 274	Highway 43 to the Continental Divide
	Continental Divide National Scenic Trail	I-15 Divide Junction to Goldstone Pass
	Lewis and Clark National Historic Trail	Gibbons Pass to Badger Pass
	Nez Perce National Historic Trail	Gibbons Pass to Bannock Pass
	Forest Trail 103, May Creek National Recreation Trail	Highway 43 to the Continental Divide
	Big Hole River, including BLM Suitable National Recreational River Segment``	Hwy 43 bridge (T1N, R14W, Sec. 26) to Maiden Rock Campground
	Site	
	All towns along Highways 43 and 278 Beaver Dam Campground North Van Houten Campground Big Hole National Battlefield Pintler Campground May Creek Campground Twin Lakes Campground Miner Lake Campground Seymour Lake Campground Mussigbrod Campground South Van Houten Campground	
Concern	**Route**	**Extent of Concern**

Level Two	Beaverhead Co. Lower North Fork Road	Its entire length north of Highway 43
	Forest Road 183 and 183A, and connecting Beaverhead Co. road	Highway 278 to Twin Lakes Campground
	Forest Road 182, Miner Lake Road and connection Beaverhead Co. road	Highway 278 to Miner Lake Trailhead
	Forest Road 573.2	North Fork Road to Mussigbrod Campground
	Forest Road 943 and county connecting roads	Highway 43 to Forest Road 624
	Forest Road 944 and 945, Foothills Road	Highway 278 to Forest Road 624
	Forest Road 185	Highway 43 to Pintler Campground
	Forest Road 96	Interstate 15 to Beaverdam Campground
	Chief Joseph Ski Trail System	All trails, Gordon Reese Cabin, and parking
	Forest Road 624	Highway 43 to Big Hole Pass
	Site	
	n/a	

Boulder River Landscape: Butte and Jefferson Ranger Districts

Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 15	I-15 crossing to the top of Boulder Hill
	State Highway 69	Boulder to Jack Creek
	Forest Road 82, Boulder River Road	Interstate 15 to the Continental Divide
	Continental Divide National Scenic Trail	Our Lady of the Rockies to Bison Mountain

	Haystack National Recreation Trail	Interstate 15 to Haystack Mountain summit
	Site	
	Basin Boulder Sheepshead Recreation Area Lowland Campground Elder Creek Picnic Area Whitehouse Campground Cottonwood Lake	
Concern Level Two	**Route**	**Extent of Concern**
	Forest Road 9485	Sheepshead Day Use to the Continental Divide
	Forest Road 442	Forest Road 82 to the Continental Divide
	Forest Road 8675, Little Boulder Road	Highway 63 to Elder Creek Picnic Area
	Forest Road 8505, Sunday Gulch Road	Interstate 15 to the CDNST
	Site	
	n/a	
Clark Fork Flint Landscape: Pintler Ranger District		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 90	Butte to Medicine Tree Hill
	US Highway 12	First 12 miles north from Garrison Junction
	State Highway 1, Pintler Scenic Loop	Drummond to Interstate 90
	State Highway 48	Interstate 90 to Highway 1
	State Highway 38 (Skalkaho Road)	Highway 1 to the Bitterroot NF boundary

	County Highway 441	Interstate 90 to Highway 1
	County Highway 274	Highway 1 to the Continental Divide
	County Road 348	Phillipsburg to Highway 38
	Forest Road 82 and county connector road	From Continental Divide to Deer Lodge
	Forest Road 8686 (Georgetown Lake Low Road)	Entire length
	Forest Road 195	Highway 1 to Anaconda Job Corp Center
	Forest Road 65	Loop from Highway 1 by Echo Lake
	Forest Road 1598	Forest Road 65 to Discover Basin Ski Area
	Forest Road 406	Highway 1 to Forest Road 672
	Forest Road 672	Highway 1 to Highway 38
	Forest Road 102	County Road 48 to the Lolo National Forest boundary
	Continental Divide National Scenic Trail	Our Lady of the Rockies to Bison Mt
	Discovery Basin Ski Trails and facilities	All trails and lifts
	Lodgepole National Recreation Trail	Highway 1 to Forest Road 65
	Site	

	All towns along included highway extents Georgetown Lake and surrounding recreation sites Flint Creek Campground Spring Hill Campground Warm Springs Picnic Area Spring Hill Picnic Area Warm Springs Campground Grant-Kohrs National Historic Site Lost Creek State Park Orofino Campground Racetrack Campground	
Concern Level Two	**Route**	**Extent of Concern**
	Forest Roads 705 and 1504, and county road following Cottonwood Creek. Also known as Spring/Emery Loop	Cottonwood Creek to Peterson Creek
	Forest Roads 707	Interstate 90 to Highway 1
	Forest Roads 302 and 645, Gold Creek	Interstate 90 to Doney Cabin
	Forest Road 78615	Gold Creek Road to Forest Road 636
	Forest Road 636	Forest Road 1554 to Forest Road 1557
	Forest Road 1544	Forest Road 636 to Forest Road 707
	Forest Road 1557	Forest Road 636 to Forest Road 1554
	Forest Road 168 and connecting county road	Deer Lodge to Rock Creek Lake
	Forest Road 670 and connecting county road	Interstate 90 to Caruthers Lake
	Forest Road 170	Highway 1 to Warm Springs Picnic Area
	Forest Road 675	Highway 1 to Storm Lake

	Forest Road 635	County Road 273 to Lost Creek Campground
	County Road 273	From Highway 48 to Galin
	Forest Road 169, Racetrack Creek Road	Warm Springs to end of road
	Forest Road 5146	Forest Road 169 to Pozega Lake
	Forest Road 5008 and 5147	Interstate 90 to Bowman Lakes
	Forest Road 5107	Forest Road 80 to end
	Forest Road 241	Forest Road 102 to Forest Trail 2
	Forest Road 261 and 5141	Forest Road 672 to East Fork Reservoir
	Forest Road 242	Forest Road 65 to Forest Road 1525
	Forest Road 1525	Phillipsburg to Forest Road 242
	Forest Road 676	State Highway 1 to Princeton
	Forest Trails 32, 33, and 34	Flints, between Phillipsburg and Boulder Cr.
	Site	
	n/a	

Elkhorn Mountains Landscape: Jefferson Ranger District & Helena National Forest

Mgt direction from the 1987 Deerlodge Plan remains until the Helena National Forest revises Forest Plan direction for this area.

Gravelly Landscape: Madison Ranger District

Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 15	Red Rock to Monida Pass
	State Highway 287	Sheridan to Silver Star
	US Highway 287	Norris to Quake Lake
	State Highway 87	US Highway 287 to Henry's Lake, ID

	Madison County 248, Ruby River Road	Alder to Ruby Reservoir
	Blacktail Road	Dillon to Centennial Valley Road
	Southside Centennial Valley Road	Monida to Henry's Lake, ID
	Madison River	Earthquake Lake to Norris
	Continental Divide National Scenic Trail	Hellroaring Creek to Raynolds Pass
	Highway 41	Twin Bridges to Dillon
	Site	
	All towns along highway concern extents Ruby Reservoir Recreation Area Cottonwood Campground Earthquake Lake Recreation Area West Fork Madison Rest Area Cliff and Wade Lakes Recreation Complex Elk Lake Recreation Area Madison River Recreation Area Red Rock Lake National Wildlife Refuge	
Concern Level Two	**Route**	**Extent of Concern**
	Blacktail Road	Price Creek to the Centennial Valley Road
	Ruby Road (Centennial Divide Road)	Ruby Reservoir to the Centennial Valley Road
	North Side Centennial Valley Road	Blacktail Road to Forest Road 8384
	Forest Road 8384, Elk Lake Road	North Side Centennial Valley Road to Elk Lake
	Forest Road 163, Warm Springs Road	Ruby River Road to Forest Road 290
	Forest Road 347	Ruby River Road to Eureka Basin
	Forest Road 290, Gravelly Range Road	Eureka Basin to Forest Road 292

	Forest Road 237, Standard Creek Road	Forest Road 209 to Forest Road 290
	Forest Road 209, West Fork Road	US Highway 287 to Little Elk River
	Forest Roads 292, Call Road and county connecting road	Ennis to Forest Road 290
	County Road 122, Horn Creek Road	State Highway 87 to Cliff Lake
	Forest Road 572	US Highway 287 to Wade Lake
	Forest Road 8386A	Forest Road 572 to Cliff Lake
	Forest Road 325	Blacktail Road to Antone Station
	Snowcrest Trail segments 603, 69, and 670	Vigilante to Antone Station and to Peterson Basin
	Divide Trail 61	Divide Administrative Site to Snowcrest Trail
	East Fork Blacktail Trail 69	East Fork Blacktail Road to Snowcrest Trail
	Hidden Lake Trail 35	Elk Lake to Cliff Lake
	Lobo Mesa Trail 405	Forest Road 290 to West Fork Trailhead
	Forest Road 1206, Elk River Jeep Trail	Forest Road 209 to Forest Trail 79
	Site	
	Hidden Lake Otter Lake Goose Lake	
Jefferson River Landscape: Butte and Jefferson Ranger District		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 90	Homestake Pass to Cardwell
	State Highway 2	Pipestone Pass to Whitehall
	State Highway 55	State Highway 41 to Whitehall
	State Highway 69	Whitehall to Boulder

	State Highway 41	State Highway 55 to Twin Bridges
	Continental Divide National Scenic Trail	Our Lady of the Rockies to Rocky Ridge Trailhead
	Jefferson River	Twin Bridges to Whitehall
	Forest Road 84	Continental Divide to Forest Boundary
	Big Hole River	Maiden Rock to Twin Bridges
	Site	
	Delmoe Lake Campground and Picnic Area Delmoe Lake Toll Mountain Campground Homestake Lake Picnic Area Pigeon Creek Campground Whitehall	
Concern Level Two	**Route**	**Extent of Concern**
	Whitetail Road	Boulder to Whitehall
	Forest Road 222	I-90 to Forest Road 8689
	Forest Road 8689	Forest Road 222 to I-90
	Site	
	n/a	
Lima-Tendoy Landscape: Dillon Ranger District		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 15	Melrose to Monida, including communities
	State Highway 278	Dillon to Wisdom, including Jackson
	Continental Divide National Scenic Trail	Goldstone Pass to Monida Pass

	Lewis and Clark National Historic Trail	Carroll Hill to State Highway 324 to Dillon, and Dillon to Lemhi Pass
	Nez Perce National Historic Trail	Wisdom to Bannock Pass
	Road 257, Medicine Lodge BLM Backcountry Byway	From Highway 278 to Interstate 15
	Site	
	Clark Canyon Reservoir and all shoreline developments Reservoir Lake Campground Lemhi Pass National Historic Landmark East Creek Campground Bannack State Park	
Concern Level Two	**Route**	**Extent of Concern**
	None Identified	n/a
	Site	
	n/a	
Madison Landscape: Madison Ranger District		
Concern Level One	**Route**	**Extent of Concern**
	US Highway 287	Earthquake Lake Visitor Center to Norris
	State Highway 287	Ennis to Madison Overlook
	Site	
	Bear Creek Trailhead	
Concern Level Two	**Route**	**Extent of Concern**
	None Identified	n/a
	Site	
	n/a	
Pioneer Landscape: Dillon, Wisdom, and Wise River Ranger Districts		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 15	Rocker to Monida Pass

	State Highway 278	Dillon to Wisdom
	State Highway 43	Interstate 15 to Chief Joseph Pass
	Forest Road 73, Pioneer Mountain National Forest Scenic Byway	Wise River to Highway 278
	Forest Road 1299	The Byway to Lacy Creek Trailhead
	Forest Road 2417	The Byway to Odell Creek Trailhead
	Forest Road 98, Birch Creek Road	Interstate 15 to Dinner Station Campground
	Forest Road 8210, Rock Creek Road	Interstate 15 to Browns Lake
	Forest Trail 750, Pioneer Loop National Recreation Trail	The Byway to Lacy Creek Trailhead
	Forest Trail 428, Grasshopper Ridge National Recreation Trail	Elkhorn Hot Springs to the Byway
	Lewis and Clark National Historic Trail	Trail Creek Road Junction to Twin Bridges
	Nez Perce National Historic Trail	Trail Creek Road Junction to Reservoir Lake
	Site	

	Towns along the extents of Interstate 15, Highway 278, and Highway 43 All Forest recreation sites along the Pioneer Mountains Scenic Byway Steel Creek Campground Coolidge Townsite and Trailhead Mono Creek Campground & Trailhead Elkhorn Hot Springs Resort Maverick Mountain Ski Area Canyon Creek Campground Canyon Creek Charcoal Kilns Browns Lake Campground Dinner Station Campground Aspen Picnic Area Birch Creek CCC camp and Bender Center	
Concern Level Two	**Routes**	**Extent of Concern**
	Beaverhead Co. Trapper Creek Road	Melrose to Glendale
	Forest Road 7401, Canyon Creek Road	Forest Road 187 to Forest Trail 92
	Forest Road 187, Quartz Hill Road	Highway 43 to Glendale
	Beaverhead Co. Argenta Road	Dillon to Argenta, and spur to Highway 278
	Forest Road 806 and 192, French Cr.	Birch Creek Road to Argenta
	Willow Creek Road, Forest Road 8200	Birch Creek Road to end of road
	Doolittle Road, Forest Road 2421	Highway 43 to end of road
	Forest Road 90	Wisdom to Steel Creek Campground
	Site	

	Steel Creek Trailhead Sawtooth Trailhead Birch Creek Cabin	
Tobacco Root Landscape: Jefferson and Madison Ranger Districts		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 90	Homestake Pass to Three Forks
	US Highway 287	Cameron to Three Forks
	State Highway 287	Ennis to Twin Bridges, and communities
	State Highway 41	Dillon to State Highway 2, and communities
	State Highway 55	Whitehall to Highway 41, and Whitehall
	State Highway 2	Pipestone Pass to Three Forks
	Highway 359	Interstate 90 to U.S. 287
	Madison Co Highway 283	Harrison to Pony, including communities
	Forest Road 107, South Boulder Road	Highway 359 to Mammoth
	Madison Co. and Forest Road 111	Sheridan to Upper Branham Lake
	Lake Louise National Recreation Trail	Forest Road 107 to end of trail
	Lost Cabin National Recreation Trail	Forest Road 107 to end of trail
	Jefferson River	Twin Bridges to Three Forks
	Madison River	Cameron To Bear Trap
	Site	

	Towns along Interstate 90, and Highways 2, 287, 41, and 84 Pony Mammoth Mill Creek Campground and Day Use Balance Rock Campground and Day Use Branham Lakes Campground Ennis Lake Recreation Complex Potosi Campground	
Concern Level Two	**Route**	**Extent of Concern**
	Forest Road 107, South Boulder River Road	Mammoth to Brannan Lakes
	Forest Road 160 and Madison Co. connecting road, N. Meadow Cr. Road	McAllister to Sure Shot Lakes
	Forest Road 1221 and Madison Co. connecting road, S. Meadow Creek Road	McAllister to South Meadow Creek Lake
	Forest Road 160 and Madison Co. connecting road, S. Willow Creek Road	Pony to Potosi Campground
	Forest Trail 301	Pony to Hollow Top Lakes
	Forest Trail 338 and 366 and Forest Road 965	Forest Road 160 to Lupine and Twin Lakes
	Site	
	n/a	
Upper Clark Fork Landscape: Butte Ranger District		
Concern Level One	**Route**	**Extent of Concern**
	Interstate Highway 90	Warm Springs to Homestake Pass
	State Hwy 1, Pintler Scenic Loop	Phillipsburg to Flint Creek
	Interstate Highway 15	Elk Park to Divide
	State Highway #2	Butte to Pipestone Pass

	Highway 441	Fairmont Hot Springs to Interstate 90
	Forest Road 8493, Roosevelt Drive	Forest Road 84 to the end of the road
	Forest Road 84	Highway 2 to CDNST
	Continental Divide National Scenic Trail	Our Lady of the Rockies to Bison Mountain
	Site	
	Butte Homestake Pass Trailhead Thompson Park Beaverdam Campground Pipestone Pass Trailhead	
Concern Level Two	**Route**	**Extent of Concern**
	Forest Road 9485 and Silver Bow Co. connecting road, Lowland Road	Butte to the Continental Divide
	Forest Road 96	Interstate 15 to Beaverdam Campground
	Moulton Reservoir Ski Trail System	
	Site	
	n/a	
Upper Rock Creek Landscape: Pintler Ranger District		
Concern Level One	**Route**	**Extent of Concern**
	State Highway 38 (Skalkaho Road)	Scenic Highway 1 to Bitterroot Forest Boundary
	County Road 348	Phillipsburg to State Highway 38
	Forest Road 406	State Highway 1 to Forest Road 672
	County Road 102	County Road 384 to the Lolo Forest Boundary

	Forest Road 672	State Highway #1 to State Highway #38
	Discovery Basin Ski Trails and Facilities	All trails and lifts
	Site	
	Moose Lake and Moose Lake Campground Stony Campground East Fork Campground Crystal Creek Campground Spillway Campground	
Concern Level Two	**Route**	**Extent of Concern**
	Forest Road 5070	Highway 38 to end of road.
	Forest Road 5141	Forest Road 261 to Forest Road 5103
	Forest Road 88, Willow Creek Road	County Road 348 to the Lolo Forest boundary
	Forest Road 5106, Moose Lake Road	Highway 38 to the end of the road
	Forest Road 80, Copper Creek Road	Forest Road 5106 to the Bitterroot Forest line
	Forest Trail 2	Forest Road 241 to Stony Lake
	Forest Trail 10	State Road 38 to Stony Lake
	Forest Trail 12	State Road 38 to Fuse Lake
	Forest Trails 313, 168, 105, and 104	Lost Tooth Cabin to Frog Pond Basin
	Site	
	Medicine Lake Copper Creek Campground	

APPENDIX B - LEASE STIPULATIONS AND NOTICES

Background

The following information pertaining to lease stipulations is taken from the booklet, "Uniform Format for Oil and Gas Lease Stipulations," prepared by the Rocky Mountain Regional Coordinating Committee in March 1989. These guidelines were developed by the Bureau of Land Management (BLM) and the Forest Service.

Stipulations are conditions that are to be made part of a lease when the environmental and planning record demonstrates the necessity for the stipulations. The stipulation forms, in this appendix, provide standardized structure, wording, and usage. What, why, and how this mitigation/protection is to be accomplished is determined by the land management agency through land management planning and National Environmental Policy Act (NEPA) analysis.

If the determination is made, upon weighing the relative resource values, uses, and/or users, that conflict with oil and gas operations exist and cannot be adequately managed under the Standard Lease Terms, a lease stipulation is necessary. Land use/management plans serve as the primary vehicle for determining the necessity for lease stipulations (BLM Manual 1624). Documentation of the necessity for a stipulation is disclosed in planning documents and through site-specific analysis. Land management plans and/or NEPA documents also establish the guidelines by which future waivers, exceptions, or modifications may be granted. Substantial modification or waiver subsequent to lease issuance is subject to public review for at least a 30-day period in accordance with Section 5102.f of the Federal Onshore Oil and Gas Leasing Reform Act of 1987.

Stipulations may be necessary if the authority to control the activity on the lease does not already exist under laws, regulations, or orders. It is important to recognize that the authorized officer has limited authority to modify the site location and design of facilities, control the rate of development and timing of activities, as well as require other mitigation under Sections 2 and 6 of the Standard Lease Terms (BLM Form 3100-11) and 43 CFR 3101.1-2. Specifically, Standard Lease Terms allow the authorized officer to move a well or other facility site up to 200 meters or delay operations for up to 60 days in a year.

The necessity for individual lease stipulations is documented in the lease-file record with reference to the appropriate land management plan or other leasing analysis document. The necessity for exceptions, waivers, or modifications also will be documented in the lease-file record through reference to the appropriate plan or other analysis. The uniform format for stipulations should be implemented when amendments or revisions of land management plans are prepared or by other appropriate means.

The uniform format for stipulations is designed to accommodate most existing stipulations by providing space to record the local mitigation objectives. The stipulations have been developed for the categories of:

No Surface Occupancy (NSO)

Timing Limitations (TL)

Conditional Surface Use (CSU)

This guidance also includes the use of lease notices. Also, there is provision for special or unique stipulations, such as those required by prior agreements between agencies when the standardized forms are not appropriate. In all cases, use of uniform forms for stipulations requires identification of specific resource values to be protected and description of the specific geographical area covered.

Standard Lease Terms

The Standard Lease Terms (ST) are contained in Form 3100-11, Offer to Lease and Lease for Oil and Gas, United States Department of the Interior, BLM, October 1992. They provide the lessee the right to use the leased land as needed to explore for, drill for, extract, remove, and dispose of oil and gas deposits located under the leased lands. Operations must be conducted in a manner that minimizes adverse impacts to the land, air, water, cultural, biological, and visual elements of the environment, as well as other land uses or users. Federal environmental protection laws such as the Clean Water Act, Endangered Species Act, and Historic Preservation Act, will be applied to all lands and operations and are included in the standard lease terms. If threatened or endangered species; objects of historic, cultural, or scientific value; or substantial unanticipated environmental effects are encountered during construction, all work affecting the resource will stop and the land management agency will be contacted.

Standard Lease Terms provide for reasonable measures to minimize adverse impacts to surface resources. These include, but are not limited to, modifications to the location or design of facilities, timing of operations, and specifications of interim and final reclamation measures. At a minimum, measures shall be deemed consistent with lease rights granted provided that they do not: require relocation of proposed operations by more than 200 meters; require that operations be sited off the leasehold; or prohibit new surface disturbing operations for a period in excess of 60 days in any lease year.

All leases on National Forest System (NFS) lands contain the “Stipulation for Lands of the National Forest System under Jurisdiction of Department of Agriculture,” requiring the lessee to comply with the rules and regulations of the Department of Agriculture. All leases are subject to regulations and formal orders of the Secretaries of the Interior and Agriculture in effect at the time of issuance.

Definitions

Conditions of Approval

Conditions of Approval (COA) are requirements under which an Application for a Permit to Drill or a Sundry Notice is approved.

Controlled Surface Use

Use and occupancy is allowed (unless restricted by another stipulation), but identified resource values require special operational constraints that may modify the lease rights. Controlled Surface Use (CSU) is used for operating guidance, not as a substitute for the NSO or timing stipulations.

Exception

Exemptions from a lease stipulation can be made on a case by case basis. The stipulation continues to apply to all other sites within the leasehold to which restrictive criteria apply.

Lease Notice

A Lease Notice (LN) provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A lease notice also addresses special items the lessee should consider when planning operations, but does not impose new or additional restrictions. Lease notices attached to leases should not be confused with Notices to Lessees (NTL) (see 43 CFR 3160.0-5).

Modification

A modification is a fundamental change to the provisions of a lease stipulation, either temporarily or for the term of the lease. Therefore, a modification may include an exemption from or alteration to a stipulated requirement. Depending on the specific modification, the stipulation may or may not apply to all other sites within the leasehold to which the restrictive criteria apply.

No Surface Occupancy

Use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect identified resource values. The No Surface Occupation (NSO) stipulation includes stipulations that may have been worded as “No Surface Use/Occupancy,” “No Surface Disturbance,” “Conditional NSO,” and “Surface Disturbance or Surface Occupancy Restriction (by location).”

Notice to Lessees

A written notice issued by the BLM authorized officer. It implements regulations and operating orders, and serve as instructions on specific item(s) of importance within a state, district, or area.

Stipulation

A provision that modifies standard lease rights and is attached to and made a part of the lease.

Timing Limitation

A Timing Limitation (TL) prohibits surface use during specified time periods to protect identified resource values. This stipulation does not apply to the operation and maintenance of production facilities unless the findings of analysis demonstrate the continued need for such mitigation and that less stringent, project-specific mitigation measures would be in sufficient.

Waiver

Permanent exemption from a lease stipulation. The stipulation no longer applies anywhere within the leasehold.

No Surface Occupancy Stipulation Guidance

The No Surface Occupancy (NSO) stipulation is intended for use only when other stipulations are determined insufficient to adequately protect the public interest. The land management plan/NEPA document prepared for leasing must show that less restrictive stipulations were considered and determined by the authorized officer to be insufficient, i.e., show why the NSO stipulation is needed. The planning/NEPA record must also show that consideration was given to a no-lease alternative when applying an NSO stipulation. An NSO stipulation is not needed if the desired protection would not require relocation of proposed operations by more than 200 meters (43 CFR 3101.1-2).

The legal subdivision, distance, location, or geographic feature, and resource value of concern must be identified in the stipulation and be tied to a land management plan and/or NEPA document.

Land description may be stated as:

The “Entire Lease”

Distance from resources and facilities such as rivers, trails, campgrounds, etc.

Legal description

Geographic feature such as a 100-year floodplain

Municipal watershed, percent of slope, etc.

Special areas with identified boundaries--area of critical environmental concern, wild and scenic rivers, etc.

Other description that specifies the boundaries of the lands affected.

The estimated percent of the total lease area affected by the restriction must be given if no legal or geographic description of the location of the restriction is given. In other cases the estimated percent is optional (see Example B-1).

This Land and Resource Management Plan identifies the specific conditions for providing waivers, exceptions, or modifications to lease stipulations. Waivers, exceptions, or modifications must be supported by appropriate environmental analysis and documentation,

and are subject to the same test used to initially justify the imposition of this stipulation. Language may be added to the NSO stipulation form to provide the lessee with information or circumstances under which waivers, exceptions, or modifications would be considered. A waiver, exception, or modification may be approved if the record shows that circumstances or relative resource values have changed or that the lessee can demonstrate that operations can be conducted without causing unacceptable impacts, and that less restrictive stipulations will protect the public interest. Waivers, exceptions, or modifications can only be granted by the authorized officer. If the waiver, exception, or modification is inconsistent with the land management planning document, that document must be amended or the change disallowed.

If the authorized officer determines, prior to lease issuance, that a stipulation involves an issue of major concern, modification or waiver of the stipulation will be subject to public review (43 CFR 3101.1-4). The land management plan also may identify other cases when a public review is required for a waiver, exception, or modification. In such cases, wording such as the following should be added to the stipulation form to inform the lessee of the required public review: “A 30-day public notice period is required prior to modification or waiver of this stipulation.”

Timing Limitations Stipulation Guidance

The Timing Limitation (TL) Stipulation prohibits fluid mineral exploration and development activities for time periods less than yearlong. When using this stipulation, assure date(s) and location(s) are as specific as possible. ***A timing limitation stipulation is not necessary if the time limitation involves the prohibition of new surface-disturbing operations for periods of less than 60 days*** (43 CFR 3101.1-2).

The land use plan/NEPA document prepared for leasing must show less restrictive stipulations were considered insufficient. The environmental effects of exploration, development, and production activities may differ markedly from each other in scope and intensity. If the effects of reasonable foreseeable production activities necessitate timing limitation requirements, this need should be clearly documented in the record. The record should (shall?) also show that less stringent, project-specific mitigation may be insufficient. In such cases the stipulation language should be modified on a case-by case basis to clearly document that the timing limitation applies to all stages of activity.

The legal subdivision and resource value of concern must be identified in the stipulation and be tiered to a land use planning and/or NEPA document. The timing limitations for separate purposes may be written on separate forms or as combined stipulation (see Example Timing Limitations). During the review and decision-making process for Application for Permit to Drill (APD) and Sundry Notices, the date(s) and location(s) should be refined based on current information.

The Beaverhead-Deerlodge Forest Plan identifies the specific conditions for providing waivers, exceptions, or modifications to lease stipulations. Waivers, exceptions, or modifications of this stipulation, such as continuing drilling operations into a restricted time period, must be supported with appropriate environmental analysis and documentation. They will be subject to the same test used to initially justify the imposition of this stipulation. Language may be added to the stipulation form to provide the lessee with information or

circumstances under which waiver, exception or modification would be considered. The need for one-time, case-by case exceptions of timing limitations stipulation may arise from complications or emergencies during the drilling program. The need for timely review and decision making is great in such cases. For this reason, it is desirable that land use plans/NEPA documents clarify how the review procedures and other requirements, if any, would apply in such cases.

A waiver, exception, or modification may be approved if the record shows how circumstances or relative resource values have changed or that the lessee can demonstrate operations can be conducted without causing unacceptable impacts, and that less restrictive stipulations would protect the public interest. If waivers, exceptions or modifications are inconsistent with the land use planning document - and that document does not disclose the conditions under which such changes would be allowed - the plan or NEPA document must be amended as necessary, or the change disallowed.

If the authorized officer determines, prior to lease issuance, a stipulation involves an issue of major concern, modification or waiver of the stipulation would be subject to public review (e.g., 43 CFR 3101.1-4). The land use plan also may identify other cases where a public review is required for waiver, exception, or modification. In such cases, wording such as the following should be added to stipulation form to inform the lessee of the required public review: “A 30-day public notice period is required prior to modification or waiver of this stipulation.”

Controlled Surface Use Stipulation Guidance

The Controlled Surface Use (CSU) stipulation is intended to be used when fluid mineral occupancy and use are generally allowed on all or portions of the lease area year-round, but because of special values or resource concerns, lease activities must be strictly controlled. The CSU stipulation is used to identify constraints on surface use or operations that may otherwise exceed the mitigation provided by Section 6 of the standard lease terms and the regulations and operating orders. The CSU stipulation is less restrictive than the NSO (No Surface Occupancy) or Timing Limitation stipulations, which prohibit all occupancy and use on all or portions of a lease for all or portions of a year. The CSU stipulation should not be used in lieu of an NSO or Timing Limitation stipulation. This stipulation should be limited to areas where restrictions or controls are necessary for specific types of activities rather than all activity.

The stipulation should explicitly describe the activity to be restricted or limited, or the operation constraints required, and must identify the applicable area and the reason for the requirement. The record must show that less restrictive stipulations were considered and determined to be insufficient. The legal subdivision, distance, location, or geographic feature, and resource value of concern must be identified in the stipulation and be tied to a land management plan and/or NEPA document.

Land management plans and/or NEPA documents should identify the specific conditions under which waivers, exceptions, or modifications to lease stipulations would be considered. Waivers, exceptions, or modifications of this stipulation must be supported with appropriate environmental analysis and documentation, and will be subject to the same test used to

initially justify the imposition of this stipulation. Language may be added to the stipulation form to provide the lessee with information or circumstances under which a waiver, exception, or modification would be considered. A waiver, exception, or modification may be approved if the record shows that circumstances or relative resource value have changed or that the lessee can demonstrate that operations can be conducted without causing unacceptable impact, and that less restrictive stipulations would protect the public interest. Waivers, exceptions, or modifications can only be granted by the authorized officer. If the waiver, exception, or modification is inconsistent with the land management planning document, that document must be amended as necessary or the change disallowed.

If the authorized officer determines, prior to lease issuance, that a stipulation involves an issue of major concern, modification or waiver of the stipulation would be subject to public review (e.g., 43 CFR 3101.1-4). The land management plan also may identify other cases when a public review is required for waiver, exception, or modification. In such cases, wording such as the following should be added to the stipulation form to inform the lessee of the required public review: “A 30-day public notice period is required prior to modification or waiver of this stipulation.”

Special Administration Stipulation Guidance

There is no required or suggested uniform format for special administration stipulations. They are usually provided by another agency or organization. However, other agencies are encouraged to use the uniform stipulation format.

Special Administration stipulations are used in situations where the three uniform stipulation forms or lease notices do not adequately address the concern. A Special Administration stipulation are used only when special external conditions, such as pre-existing agreements with other agencies, require use of a one-of-a-kind stipulation that is not used in any other area or situation. The resource use or value, location, and specific restrictions must be clearly identified. In addition, the external agency, agreement, or pre-existing use that dictates the special restrictions must be identified. The stipulation should state if and under what circumstances a waiver, exception, or modification may be allowed.

STIPULATIONS

PRESCRIBED STIPULATIONS - This section describes the stipulations that will be attached to Beaverhead National Forest leases. Conditions are also described for waivers, exceptions, and modifications as follows:

Eligible Scenic and Recreation Segments of Wild and Scenic River Candidates

Stipulation:	Controlled Surface Use - ¼ mile buffer
Mapping Criteria:	Scenic and Recreational River Segments GIS layer s21_ScenicRecRivers
Objective:	To protect scenic and recreational river values along the river corridor and within a buffer zone of ¼ mile on either side. Proposed activities must be designed or located in such a manner as to not affect the eligibility of the river segment.
Waiver:	This stipulation may be waived if it is determined the entire lease no longer contains a scenic and recreational river candidate area.
Exception:	An exception may be granted if the operator can demonstrate in a surface use plan of operations that the scenic and recreational river values of the area can be maintained at a level acceptable to the authorized forest officer.
Modification:	This stipulation may be modified if it is determined portions of the lease no longer contain scenic and recreational river candidate areas.
Justification:	The area is a candidate area for wild and scenic rivers designation. Therefore, a Controlled Surface Use stipulation is necessary to notify potential lessees of the resource concern and restrictions on activities. Under Standard Lease Terms some impacts could be mitigated but operations could not be denied if all the scenic and recreational values could not be protected. The No Surface Occupancy or No Lease stipulations were not considered appropriate since impacts can be mitigated using a Controlled Surface Use stipulation and not leasing could subject the federal mineral estate to drainage from adjacent leased lands.

Research Natural Areas

Stipulation:	No Surface Occupancy
Mapping Criteria:	Research Natural Areas GIS layer s23_ResearchNatAreas
Objective:	To preclude surface disturbance and maintain near natural conditions for future research.
Waiver:	A waiver may be granted if it is determined the entire leasehold no longer contains portions of a Research Natural Area.
Exception:	None
Modification:	A modification may be granted if the Research Natural Area boundaries have changed.
Justification:	A commitment has been made to maintain the area in near natural conditions for future research and use and a No Surface Occupancy stipulation is deemed necessary to protect the area in such a condition. Also, the area contains unique resources that cannot be provided elsewhere on the forest. If the operations within these areas would be allowed under either a Controlled Surface Use or Timing Limitation stipulations, or under Standard Lease Terms, natural conditions and value for future research within the area could be affected. The

No Lease stipulation is not considered appropriate since impacts can be mitigated using a No Surface Occupancy stipulation and not leasing could subject the federal mineral estate to drainage from adjacent leased lands.

Eligible Wild Segments of Wild and Scenic River Candidates

Stipulation:	Administratively Unavailable.
Mapping Criteria:	One quarter mile buffer around segments. GIS layer s22_WildRivers
Objective:	n/a
Waiver:	n/a
Exception:	n/a
Modification:	n/a
Justification:	n/a

Inventoried Roadless Areas

Stipulation:	Controlled Surface Use
Mapping Criteria:	2001 Roadless Area Conservation Rule FEIS Inventoried Roadless Areas GIS layer s25_ira
Objective:	To preclude new temporary roads, permanent roads, road construction or reconstruction as defined in 36 CFR 294.11
Waiver:	This stipulation may cease to apply in the event the District Court orders reinstating the 2001 Rule are reversed, set aside, or if the Forest Service determines that other events have caused the 2001 rule to no longer be in effect.
Exception:	Same as waiver
Modification:	Same as waiver
Justification:	Compliance with Orders of the District Court C05-03508 and C05-04038

Big Game Winter Range

Stipulation:	July 2006, Montana Fish, Wildlife, and Parks - Big Game Winter Range. GIS layer s05_BigGameWinterRange
Mapping Criteria:	Timing Limitation
Objective:	To preclude surface disturbing activities in big game winter range. Big game can be adversely affected by drilling activity, causing increased stress and/or displacement during the critical December 2 to May 15 time period.
Waiver:	A waiver may be granted if habitat studies, in coordination with Montana Fish, Wildlife, and Parks, conclude the area affected by this stipulation is no longer used as big game winter range.
Exception:	An exception may be granted if seasonal conditions are such that the animals have moved and are not using the specified area during the time they would normally be expected.
Modification:	A modification of the stipulation may be granted if habitat studies show that a portion of the area is not important winter range.

Justification:	Standard Lease Terms provide for delay of activities for up to 60 days. Since the critical period extends for approximately 166 days, the Standard Lease Terms would not be adequate. The No Lease or No Surface Occupancy stipulations are overly restrictive since operations conducted outside the winter range period would have a minimal effect on big game.

Trumpeter Swan Nests

Stipulation:	Timing Limitation
Mapping Criteria:	Within ½ mile of known trumpeter swan nests. GIS layer s06_Nests
Objective:	To preclude surface disturbing activities near nests which may cause increased stress and/or displacement of birds during the critical April 1 to September 1 time period.
Waiver:	A waiver may be granted if new habitat studies, in coordination with Montana Fish, Wildlife, and Parks, conclude the area affected by this stipulation is not critical for trumpeter swans.
Exception:	An exception may be granted if the operator demonstrates in a plan of operations, that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	A modification of the stipulation may be granted if new habitat studies show a portion of the area is not used by trumpeter swans.
Justification:	Surface activities within these areas could adversely impact trumpeter swans. If operations were allowed to occur under Standard Lease Terms or Controlled Surface Use, swans could be displaced. The No Surface Occupancy and No Lease stipulations are overly restrictive since impacts can be avoided by using the Timing Limitation stipulation.

Bald Eagle and Peregrine Falcon Nests

Stipulation:	No Surface Occupancy
Mapping Criteria:	One half mile around bald eagle and peregrine falcon nests from February 1 to September 1. GIS layer s07_BaldEagleETALL
Objective:	To protect habitat and to facilitate recovery of the species.
Waiver:	A waiver may be granted if new habitat studies, coordinated with the US Fish and Wildlife Service, conclude the area affected by this stipulation no longer contains an eagle or falcon nest.
Exception:	An exception may be granted if the operator demonstrates, in a plan of operations, that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	Same as waiver.
Justification:	A No Surface Occupancy stipulation is necessary to ensure continued use of the nest. If operations within these areas were to be under either a Controlled Surface Use or Timing Limitations stipulation, or under Standard Least Terms, the use of these areas by eagles or falcons would be affected. The No Lease stipulation is not considered appropriate since impacts can be mitigated using a No Surface Occupancy stipulation. No Lease could expose the federal mineral estate to revenue losses as a result of drainage from adjacent leased lands.

Bald Eagle and Peregrine Falcon Habitat

Stipulation:	Timing Limitation
Mapping Criteria:	An additional one half mile from No Surface Occupation area. GIS layer s07_BaldEagleETALL
Objective:	Buffer is and additional ½ mile to preclude surface disturbing activities around nests. Disturbance may cause increased stress and/or displacement of eagles or falcons during the critical February 1 to September 1 time period.
Waiver:	A waiver may be granted if new habitat studies, coordinated with the US Fish and Wildlife Service, conclude the area affected is not critical for eagles or peregrine falcons.
Exception:	An exception may be granted if the operator demonstrates, in a plan of operations, that impacts from the proposed action are acceptable or can be adequately mitigated. If the nest area contains only a peregrine falcon nest, an exception to the timing limitation from February 1 through March 31 would be considered.
Modification:	A modification of the stipulation may be granted if new habitat studies show a portion of the area is not used by eagles or peregrine falcons.
Justification:	Surface activities within these areas could adversely impact bald eagles or peregrine falcons. If operations were allowed under Standard Lease Terms or Controlled Surface Use, eagles and peregrine falcons could be displaced. The No Surface Occupancy and No Lease stipulations are overly restrictive since impacts can be avoided by using a Timing Limitation stipulation.

Grizzly Bear Habitat

Stipulation:	Controlled Surface Use
Mapping Criteria:	Grizzly Bear Amendment for the Greater Yellowstone Ecosystem Occupied Habitat as mapped by Kim Barber (USFS, 2006). GIS layer s08_GrizzlyHabitat
Objective:	To ensure proposed activities do not adversely affect the viability of grizzly bears. Operations will be designed and/or located to not adversely affect grizzly bears. Coordination of timing and timing adjustments in activities within grizzly use areas may be necessary. Noise levels may also be limited.
Waiver:	A waiver may be granted if habitat studies, in coordination with Montana Fish, Wildlife, and Parks, conclude the area affected by this stipulation is no longer used as grizzly bear habitat.
Exception:	An exception may be granted if the operator demonstrates, in a plan of operations, that impacts from the proposed action are acceptable or can be adequately mitigated.
Modification:	A modification of the stipulation may be granted if new habitat studies show that a portion of the area is not used by grizzly bears.
Justification:	Surface activities within these areas could adversely impact grizzly bears. If operations were allowed to occur under Standard Lease Terms, the bears could be displaced. No Surface Occupancy and No Lease stipulations are overly restrictive since impacts can be avoided by using a Controlled Surface Use stipulation.

Westslope Cutthroat Trout in Fish Key Watersheds

Stipulation:	No Surface Occupancy
Mapping Criteria:	Fish Key Watersheds GIS layer s09_Alts_Wct
Objective:	To prevent negative effects to westslope cutthroat trout populations critical to species viability.
Waiver:	None
Exception:	None
Modification:	None
Justification:	Forest plan direction precludes multiple management activities from these watersheds to ensure viability requirements are met.

Westslope Cutthroat Trout Conservation Populations

Stipulation:	Controlled Surface Use
Mapping Criteria:	Watersheds with westslope cutthroat trout conservation populations outside of fish key watersheds GIS layer s09_Alts_Wct
Objective:	To minimize effects to westslope cutthroat trout populations important to meet conservation objectives, mitigation will be applied to: Ensure no net increase in sediment over existing condition. Off-site mitigation may be required within the occupied reach of stream. Centralize drilling or production pads to minimize road network. Require that any proposed linear feature, pipeline, road, utility, etc. crossing a conservation population stream, be mitigated by special engineering or underground construction measure. Limit number of stream crossings. Ensure operations will not affect stream water quality and quantity.
Waiver:	None
Exception:	If a population is determined extinct, and the State of Montana and Beaverhead-Deerlodge National Forest biologists determine the watershed is not critical for future restoration of westslope cutthroat trout, an exception may be granted.
Modification:	None
Justification:	Standard lease terms were determined inadequate to meet conservation objectives. Mitigation under Controlled Surface Use ensures water quality, quantity, and habitat, adequate to maintain conservation populations. No Surface Occupancy was determined unnecessary because viability requirements were met through the NSO for Fish Key Watersheds Stipulation and the CSU mitigation on conservation populations outside of fish key watersheds.

Arctic Grayling

Stipulation:	Controlled Surface Use
Mapping Criteria:	The Ruby River from the forest boundary to its headwaters near Divide Creek. On the east side of the river the CSU buffer will be ½ mile wide and ¼ on the west side. The east side requires a wider buffer because the slopes are less stable than those on the west side. National Forest System within the Trail Creek Hydrologic Drainage up to the confluence with May Creek. Tributaries to the Big Hole River where sediment introduction is affecting grayling habit: Lower Steel, Squaw, Sawlog, Shaw, Papoose, Toomey, Tucker, and Walker creeks. The main branch of Steel Creek will be buffered from the forest boundary, upstream for 2 miles to Moose Meadows. The buffer on the north side of the creek will be a ½ mile wide and 1 mile on the south side. This configuration follows the hydrologic boundaries of this portion of the drainage. On all other listed streams, CSU will apply to the National Forest System within their hydrologic drainages. GIS layer s10_Grayling
Objective:	To protect Arctic Grayling in the Big Hole and Ruby river drainages. To meet conservation objectives mitigation measures will apply to: Ensure no net increase in sediment over existing condition. Off-site mitigation may be required within the occupied reach of stream. Centralize drilling or production pads to minimize road network. Require any proposed linear feature, pipeline, road, utility, etc. across arctic grayling streams be mitigated by special engineering or underground construction measures to protect the stream. Limit the number of stream crossings Ensure operations will not affect stream water quality and quantity.
Waiver:	None
Exception:	If the Ruby River Population is determined extinct and the State of Montana and Beaverhead-Deerlodge National Forest biologists determine the stream reach is not critical for future restoration of arctic grayling, an exception may be granted.
Modification:	None
Justification:	Standard lease terms were determined inadequate to meet conservation objectives. Mitigation under Controlled Surface Use ensures water quality, quantity, and habitat adequate to maintain conservation.

Slopes over 60%

Stipulation:	No Surface Occupancy
Mapping Criteria:	Slopes over 60% GIS layer s11_Slopes60
Objective:	To minimize the potential for adverse effects to soil and water.
Waiver:	None
Exception:	An exception may be granted if the operator can demonstrate, in a surface use plan of operations that adverse effects can be minimized and activities safely conducted.
Modification:	A modification may be granted if an on-the-ground inspection of a proposed well site or facility shows that an area of less than 60% slope exists or that design of the site can mitigate erosion and reclamation concerns.

Justification:	This stipulation is necessary to protect the basic soil and water resources. Soils disturbance of an area required for a well pad on steep slopes would be difficult to reclaim and could result in unacceptable soil loss through erosion, displacement, and compaction and could potentially increase the sediment load of streams. If operations within these areas were to be allowed under Standard Lease Terms, erosion and reclamation could result. The No Lease option is not considered appropriate since impacts can be mitigated using a Controlled Surface Use stipulation. No Lease could expose the federal mineral estate to revenue losses as a result of drainage from adjacent leased lands.

Areas of Mass Failure

Stipulation:	No Surface Occupancy
Mapping Criteria:	Areas where potential exists for mass failure GIS layer s12_AreasMassFailure
Objective:	To preclude construction of well sites and related facilities in areas where the potential for mass failure exists because these areas of high erosion and stability hazard are difficult to reclaim.
Waiver:	None
Exception:	An exception may be granted if the operator can demonstrate in a surface use plan of operation that adverse effects can be minimized and activities safely conducted.
Modification:	A modification may be granted if an on-the-ground inspection of a proposed well site or facility determines a low risk of mass wasting or that site design can mitigate failure and reclamation concerns.
Justification:	This stipulation is necessary to protect the basic soil and water resources. Soil disturbance of an area required for a well pad on mass wasting soils would be difficult to reclaim, could result in unacceptable soil loss through erosion, and potentially increase the sediment load of streams. If operations within these areas were to be allowed under Controlled Surface Use or Timing Limitation stipulations, or under Standard Lease Terms, erosion and reclamation of the area could be affected. The No Lease option is not considered appropriate since impacts can be mitigated using a No Surface Occupancy stipulation. No Lease could expose the federal mineral estate to revenue losses as a result of drainage from adjacent leased lands.

Areas Prone to Failure with Slopes over 35%

Stipulation:	No Surface Occupancy
Mapping Criteria:	Current soil survey overlaid with slopes over 35% GIS layer s13_ProneFailureGT35
Objective:	To preclude construction of well sites and related facilities in areas which would be difficult to rehabilitate and to preclude surface disturbing activities on areas that have a high erosion/stability hazard rating
Waiver:	None
Exception:	An exception may be granted if the operator can demonstrate in a surface use plan of operations that adverse effects can be minimized and activities safely conducted.
Modification:	A modification may be granted if an on-the-ground inspection of a proposed well site or facility shows an area of less than 35% slope exists and mass wasting - prone soils do not exist or that design of the site can mitigate erosion, failure, and reclamation concerns.

Justification:	This stipulation is necessary to protect the basic soil and water resources. Soil disturbance of an area required for a well pad on steep slopes or mass wasting soils would be difficult to reclaim, could result in unacceptable soil loss through erosion, and could increase the sediment load of streams. If operations within these areas were to be allowed under Controlled Surface Use, Timing Limitations, or Standard Lease Terms, erosion, failure, and reclamation of the area could be affected. The No Lease stipulation is not considered appropriate since impacts can be mitigated using a No Surface Occupancy stipulation. No Lease could expose the federal mineral estate to revenue losses as a result of drainage from adjacent leased lands.

Areas Sensitive to Soil Compaction

Stipulation:	Controlled Surface Use
Mapping Criteria:	Areas where soil has a high compaction /displacement hazard. GIS layer s14_SensitiveSoilCompaction
Objective:	To protect areas where soil conditions are such that the site would be difficult to rehabilitate and have a high compaction/displacement hazard. Reclamation standards will include: control of species, planting rate and methods, seed bed preparation method, and quality and handling of available topsoil.
Waiver:	None
Exception:	An exception may be granted if the operator can demonstrate in a surface use plan of operations that adverse effects can be minimized and activities safely conducted.
Modification:	A modification may be granted if an on-the-ground inspection of proposed well site or facility shows an area of sensitive soils does not exist or that site design can mitigate erosion, failure, and reclamation concerns.
Justification:	This stipulation is necessary to protect the basic soil and water resources. Soil disturbance on sensitive soils in an area of the size required for a well pad would be difficult to reclaim and could result in unacceptable soil damage, compaction, and displacement, it could also increase the sediment load of streams. If operations within these areas were to be allowed under either a Timing Limitation stipulation or under Standard Lease Terms, sensitive soils could be affected and reclamation would be difficult.

Heritage Resource Sites and Traditional Cultural Properties

Stipulation:	No Surface Occupancy
Mapping Criteria:	Heritage resource sites larger than 40 acres GIS layer s15_CulturalSites
Objective:	To meet forest plan objectives to preserve in place significant heritage resources and to avoid disturbance to traditional cultural properties. Stipulations will be applied to ensure proposed activities do not adversely affect heritage resource sites larger than 40 acres. Heritage sites smaller than 40 acres will also be stipulated NSO but it is assumed operations will be designed and/or located to not adversely affect the heritage resource site.
Waiver:	None
Exception:	If the on-site inspection reveals archaeological or historic material that does not constitute a heritage site, or an archaeological site exists but is not significant, an exception may be granted. No exceptions will be given for traditional cultural properties.

Modification:	None
Justification:	To prevent the construction of well sites, support facilities and access roads on heritage sites eligible for inclusion in the National Register of Historic Places, or on sites whose significance has not been determined.

Grasshopper and Rock Creek Recreation Areas

Stipulation:	Controlled Surface Use
Mapping Criteria:	Management Area 28 and 30 from the 1986 Beaverhead Forest Plan. GIS layer s16_RecAreas
Objective:	To control surface occupancy and new surface disturbing activities in these recreation areas by requiring activities to be located and operations conducted in a manner that will minimize the effects on the characteristics of the area. Extensive reclamation will be required.
Waiver:	A waiver may be granted if these areas cease to be managed for their recreational values.
Exception:	Same as Waiver
Modification:	Same as Waiver
Justification;	A Controlled Surface Use stipulation is considered necessary to protect the recreation experience. By enforcing a CSU stipulation, noise, lights, and other disturbances to the visitors at the recreation area should be minimized. The No Surface Occupancy or No Lease stipulations are overly restrictive since operations within the area can be mitigated using a Controlled Surface Use stipulation.

Special Use Recreation Residences

Stipulation:	Controlled Surface Use
Mapping Criteria:	A quarter mile buffer around Special Use Recreation Residences GIS layer s17_RecreationResidences
Objective:	To control surface occupancy and new surface disturbing activities for special use recreation residences by requiring activities to be located and operations conducted in a manner that will minimize the effects on the characteristics of the area. Extensive reclamation will be required.
Waiver:	A waiver may be granted if the recreation residence is moved or eliminated.
Exception:	Same as waiver
Modification:	Same as waiver
Justification:	A Controlled Surface Use stipulation is considered necessary to protect the recreation experiences of the special use recreation residences permittees. By enforcing a CSU stipulation, noise, light, and other disturbances to visitors at the residence should be minimized. A No Surface Occupancy stipulation or No Lease are overly restrictive since operations within the area can be mitigated using a Controlled Surface Use stipulation and occupation of the sites is not year-round.

Developed Campgrounds and Administrative Sties

Stipulation:	No Surface Occupancy
Mapping Criteria:	Sites within one half mile of developed campgrounds, or administrative sites

	GIS layer s18_Campgrounds_AdminSites
Objective:	To preclude surface occupancy and surface disturbing activities.
Waiver:	A waiver may be granted for campgrounds or administrative sites if the site is moved or eliminated.
Exception:	An exception may be granted for campgrounds or administrative sites if the site is moved or eliminated.
Modification:	Same as waiver.
Justification:	Construction of site developments allocates those specific lands to a specific use. A No Surface Occupancy stipulation is deemed necessary to protect the capital investment. If operations were to be allowed within these areas under either a Controlled Surface Use or Timing Limitations stipulation, or under Standard Lease Terms, the capital investment and/or recreational setting could be affected. The No Lease option is not considered appropriate since impacts can be mitigated using a No Surface Occupancy stipulation and not leasing could subject the federal mineral estate to drainage from adjacent lease lands.

National Scenic and Historic Trails

Stipulation:	No Surface Occupancy
Mapping Criteria:	One quarter mile corridor of the Continental Divide National Scenic Trail or half mile buffer along the Nez Perce and Lewis and Clark national historic trails. GIS layer s19_NationalTrails
Objective:	To preclude surface occupancy and surface disturbing activities
Waiver:	None
Exception:	An exception may be granted if a surface occupancy plan shows that the designated routes, recreation experiences along those routes, and historic resources are protected.
Modification:	Same as exception.
Justification:	These National Trails have been designated to protect historic resources and to provide recreation opportunities. If operations were to be allowed within these areas under either a Controlled Surface Use or Timing Limitations stipulation, or under Standard Lease Terms, the capital investment and/or recreational setting could be affected. The No Lease option is not considered appropriate since impacts can be mitigated using a No Surface Occupancy stipulation and not leasing could subject the federal mineral estate to drainage from adjacent lease lands.

Specific Semi-Primitive Recreation Areas

Stipulation:	Controlled Surface Use
Mapping Criteria:	GIS layer s04_Alts_PrimitiveSemiprimitive (1986 Beaverhead National Forest Plan MA 8 and the current West Big Hole Management Area.)
Objective:	To maintain semi-primitive values of the area through use of extensive reclamation requirements. The stipulation will also require activities to be located and operations conducted in a manner that will minimize the effects on the area characteristics.
Waiver:	A waiver may be granted if the area is no longer managed for semi-primitive values.
Exception:	None

Modification:	This stipulation may be modified if it is determined portions of the lease are no longer managed for semi-primitive recreation opportunities.
Justification:	These areas have been recognized for their high value as primitive and semi-primitive areas. Application of a Controlled Surface Use stipulation protects the surface resources and does not preclude development of potential oil and gas resources. If operations were allowed under Standard Lease Terms, the roadless character and recreational value of the area could be impacted. A No Lease stipulation is not necessary since the application of a Controlled Surface Use stipulation protects the resource concern and provides some opportunity to explore for oil and gas. Oil and gas exploration activities can be located or mitigated so the integrity of the area will not be affected.

Areas of High Scenic Value

Stipulation:	No Surface Occupancy
Mapping Criteria:	Forest plan management areas with a high scenic objective and one half mile buffer on Concern Level One routes and sites. GIS layer s20_SenicValue
Objective:	To provide high scenic integrity
Waiver:	None
Exception:	An exception may be granted if the operator can demonstrate in a surface use plan of operations that the objectives for scenery can be met.
Modification:	None
Justification:	Areas are designated as high value because of natural beauty in proximity to travel routes or sites where users expect and desire a natural appearance. Therefore, a No Surface Occupancy stipulation is deemed necessary to notify potential lessees of the resource concern and restrictions.

Areas of Moderate Scenic Value

Stipulation:	Controlled Surface Use
Mapping Criteria:	All areas that do not meet the criteria for high scenic value and are outside of the Tie-Johnson and Bryant Creek Mass. GIS layer s20_ScenicValue
Objective:	To ensure the scenic integrity of the area is maintained, proposed activities would be required to be located or designed to meet a minimum moderate scenic integrity level.
Waiver:	None
Exception:	An exception may be granted if the operator can demonstrate in a surface use plan of operations that the objectives for scenery can be met.
Modification:	If the area is determined to be not visible from those sensitive routes and sites listed above mitigation for scenery may not be needed.
Justification:	Application of the Controlled Surface Use stipulation identifies the standard an operator must meet and provides the opportunity to conduct activities as long as the standard is met. The No Lease or No Surface Occupancy stipulations are deemed overly restrictive because visual impacts to the scenic integrity level can often be mitigated by vegetative or topographic screening Under the Standard Lease Terms some impacts could be mitigated but operations could not be denied if the moderate scenic integrity level could not be mitigated.

Lease Notice Background

Lease notices are attached to leases to transmit information at the time of lease issuance to assist the lessee in submitting acceptable plans of operation or to assist in administration of leases. Lease notices are attached to leases in the same manner as stipulations. However, there is an important distinction between lease notices and stipulations: lease notices do not involve new restrictions or requirements. Any requirements contained in a lease notice must be fully supported either in a law, regulation, standard lease term, or an onshore oil and gas order. A lease notice is not signed by the lessee. Guidance in the use of lease notices is found in BLM Manual 3101 and 43 CFR 3101.1-3.

A lease notice should contain the following elements:

The resource/use/value,

The lands affected, if applicable,

The reason(s),

The effect on lease operations or what may be required, and

A reference to the lease term, regulation, law, or the order from which enforcement authority is derived.

If a situation or condition is known to exist that could affect lease operations, there should be full disclosure at the time of lease issuance via a lease notice. If a lessee may be prevented from extracting oil and gas through a prohibition mandated by a specific non-discretionary statute, such as the Endangered Species Act, then a stipulation may be used even though a lease notice would be sufficient. It is at the discretion of the authorized officer whether a situation is sufficiently sensitive to warrant the use of a lease stipulation.

BEAVERHEAD NATIONAL FOREST LEASE NOTICES

The following language provides example language for lease notices. Since lease notices transmit information about laws, regulations, or orders, the language in the lease notices may change if the underlying law, regulation, or order changes.

NOTICE FOR LANDS OF THE NATIONAL FOREST SYSTEM UNDER JURISDICTIONOF DEPARTMENT OF AGRICULTURE

The permittee/lessee must comply with all the rules and regulations of the Secretary of Agriculture set forth at Title 36, Chapter II, of the Code of Federal Regulations governing the use and management of the National Forest System (NFS) when not inconsistent with the rights granted by the Secretary of Interior in the permit. The Secretary of Agriculture's rules and regulations must be complied with for (1) all use and occupancy of the NFS prior to approval of an exploration plan by the Secretary of the Interior, (2) uses of all existing improvements, such as forest development roads, within and outside the area permitted by the Secretary of the Interior, and (3) use and occupancy of the NFS not authorized by an exploration plan approved by the Secretary of the Interior.

All matters related to this stipulation are to be addressed to:

Forest Supervisor or District Ranger

who is the authorized representative of the Secretary of Agriculture.

CULTURAL RESOURCES - The FS is responsible for assuring that the leased lands are examined to determine if cultural resources are present and to specify mitigation measures, in accordance with the Archaeological Resources Protection Act of 1979, the National Historic Preservation Act of 1966 (as amended), and the American Indian Religious Freedom Act of 1996. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the FS, shall:

1. Contact the FS to determine if a site specific cultural resource inventory is required. If a survey is required, then:

2. Engage the services of a cultural resource specialist acceptable to the FS to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the area of proposed disturbance to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the FS for review and approval at the time a surface disturbing plan of operation is submitted.

3. Implement mitigation measures required by the FS and BLM to preserve or avoid destruction of cultural resource values. Mitigation may include relocation of proposed facilities, testing, salvage, and recordation or other protective measures. All costs of the inventory and mitigation will be borne by the lessee or operator, and all data and materials salvaged will remain under the jurisdiction of the U.S. Government as appropriate.

The lessee or operator shall immediately bring to the attention of the FS and BLM any cultural or resources or any other objects of scientific interest discovered as a result of surface operations under this lease, and shall leave such discoveries intact until directed to proceed by FS and BLM.

Vertebrate Paleontology Notice - The FS is responsible for assuring that the leased lands are examined to determine if paleontologic resources are present and to specify mitigation measures, in accordance with Organic Act, and the National Forest Management Act of 1976

Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator, unless notified to the contrary by the Forest Service, shall:

1. Contact the Forest Service to determine if a site-specific vertebrate paleontologic inventory is required. The Forest Service will conduct inventories and surveys as part of the field review for the proposed activity on the lease. The operator may voluntarily engage the services of a qualified paleontologist to conduct the inventory.
2. Implement mitigation measures required by the Forest Service and Bureau of land management to preserve or avoid destruction of vertebrate paleontologic resources. Mitigation may include relocation of proposed facilities or other protective measures.
3. The lessee or operator shall immediately bring to the attention of the Forest Service any vertebrate paleontological resources discovered as a result of surface operation under this lease, and shall leave such discoveries intact until directed to proceed by the Forest Service.

FLOODPLAIN AND WETLANDS - The lessee is hereby notified that this lease may contain land within a riparian ecosystem. All activities within this area may be highly restricted in order to comply with Executive Order 11988 - *Floodplain Management* and Executive Order 11990 - *Protection of Wetlands*, in order to preserve and restore or enhance the natural and beneficial values served by floodplains and wetlands.

Riparian ecosystems will be managed by the Forest Service to protect from conflicting uses in order to provide healthy, self-perpetuating plant and water communities that will have optimum diversity and density of understory and overstory vegetation. Occupancy and use of lands within riparian ecosystems proposed in a proposed Surface Use Plan of Operations will be considered in an environmental analysis done to identify the mitigation measures necessary to protect the riparian area. Special

measures such as road design, well pad size and location or directional drilling, may be made part of the permit authorizing the activity.

THREATENED, ENDANGERED, AND SENSITIVE PLANT OR ANIMAL SPECIES LEASE NOTICE

The lease area may contain threatened and endangered species or habitat necessary for the continued existence of threatened, proposed, candidate or endangered species which are protected by the 1973 Endangered Species Act, as amended (16 USC 1531 et seq.) and implementing regulations (50 CFR 402 et seq.). The lease area may also contain habitat or species, which may require protective measures to prevent them from being listed as threatened or endangered; or result in a loss of viability or biological diversity

(36 CFR 219.19 or 219.26). A biological evaluation of the leased lands may be required prior to surface disturbance to determine if endangered, threatened, proposed, candidate or sensitive plant or animal species or their habitat are present and to identify needed mitigation measures. Prior to under taking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

1. Contact the Forest Service to determine if a biological evaluation is required. The Forest Service is responsible for ensuring that the leased land is examined through a biological evaluation, prior to undertaking any surface-disturbing activities, to determine effects upon any plant or animal species listed or proposed for listing as threatened, endangered, or a sensitive species.

2. The lessee or operator may choose to conduct the evaluation on the leased lands at their discretion and cost. This biological evaluation must be done by or under the supervision of a qualified biologist/botanist approved by the Forest Service. An acceptable report must be provided to the Forest Service identifying the anticipated effects of a proposed action on endangered, threatened, proposed, candidate or sensitive species. An acceptable biological evaluation is to be submitted to the Forest Service for review and approval no later than that time when an otherwise complete application for permit to drill or subsequent surface-disturbing operation is submitted.

3. Implement mitigation measures required by the Forest Service. Mitigation may include the relocation of proposed lease-related activities or other protective measures. The findings of the biological evaluation, analysis and consultation may result in restrictions to the operator's plans or even disallow use and occupancy to comply with the 1973 Endangered Species Act (as amended), threatened and endangered species regulations and Forest Service statutes and regulations.

If endangered, threatened, proposed, candidate or sensitive plant or animal species are discovered in the area after any required biological evaluation has concluded; an evaluation will be conducted to assess the effect of ongoing and proposed activities. Based on the conclusion drawn in the evaluation, additional restrictions or prohibitions may be imposed to protect the species or their habitats.

APPENDIX C - PROJECTED OUTPUTS AND BUDGET

	Average Annual Estimated Goods and Services*					
Outputs	Current Level	Decade 1	Decade 2	Decade 3	Decade 4	Decade 5
Sawtimber Volume (CCF)	28,000	28,000	28,360	28,670	28,690	29,890
Sawtimber Volume (MMBF)	14	14	14.2	14.3	14.4	14.9
Fuelwood/post and poles (CCF)	5,000	5,000	5,000	5,000	5,000	5,000
Cattle, Horse, Bison Grazing (AUMs)	163,700	163,700	163,700	163,700	163,700	163,700
Sheep Grazing (AUMs)	7,400	7,400	7,400	7.400	7,400	7,400
General Recreation Visits	432,217	432,217	475,439	522,982	575,280	632,808
Hunting, Fishing, Wildlife Viewing Visits	389,464	389,464	428,410	471,251	518,376	570,214
Summer Motorized Recreation Visits	80,339	80,339	88,372	97,211	106,931	117,624
Snowmobile Visits	10,434	10,434	11,477	12,625	13,888	15,276
Crude Oil (barrels from 4 wells)**	0	12,704	17,236	17,862	18,014	18,043
Natural Gas (MCF from 4 wells)**	0	503,000	901,000	1,007,000	1,036,000	1,042,000
Forest Service Budget Expenditures (M$)	19,385	19,385	19,188	19,088	18,888	18,988

*Assumptions are documented in the Project File “FEIS PNV Assumptions” where recreation visits are organized by categories described in the Resources Planning Act (RPA)

*based on reasonably foreseeable development scenario

APPENDIX D - SCHEDULE OF TIMBER SALES AND RELATED ACTIVITIES

The following schedule is displays the proposed timber sales to be offered to the public during the next three years (to meet the requirements of CFR 219.16) along with the schedule of watershed restoration and other activities incorporated into or funded by the stewardship portion of those sales. The timber sale program is one aspect of the Northern Region Integrated Restoration Strategy designed to comply with the National Fire Plan and emphasizing stewardship contracting to achieve multiple forest objectives. This is the BDNF contribution to the Regional 3-year schedule and subject to revision upon approval by the Forest Supervisor. Each year the Forest reviews the Integrated Restoration Strategy, makes necessary adjustments, and adds another year's activities to the schedule. Abbreviations used in the tables are as follows:

DIST = District	D3 = Wise River Ranger District
D4 = Butte Ranger District	D6 = Madison Ranger District
D6 = Jefferson Ranger District	D8 = Pintlar Ranger District
HUC = hydrologic unit code (Montana NRIS 2003 Version Watersheds)	CCF = hundred cubic feet
STWD = stewardship contract	WUI = wildland urban interface

PROJECT NAME	DIST	6TH CODE HUC (NRIS 2003)	ACTIVITY	OUT-PUT	UNIT	STWD
2008						
Lime Kiln	D4	170102010202	Timber Sale, Salvage	7000	CCF	YES
		170102010202	Fuel Reduction, WUI	350	Acres	YES
		170102010202	Road Maintenance	.5	Miles	YES
		170102010202	Road Maintenance-STWD	3	Miles	YES
		170102010202	Noxious Weed Trtmt- STWD	350	Acres	YES
		170102010202	Habitat Enhancement	200	Acres	YES
		170102010202	Stream Enhancement	1	Mile	YES
		100200050102	Habitat Enhancement-STWD	1000	Acres	YES
		170102010202	Stream Enhancement-STWD	2	Miles	YES
		170102010202	Soil & Water Improvement	20	Acres	YES
		170102010202	Soil & Water Improvement-STWD	180	Acres	YES
Homestake Pass	D4	170102010202	Timber Sale, Salvage	6000	CCF	YES
		170102010202	Fuel Reduction, WUI	600	Acres	YES
		170102010202	Road Decommission	2	Miles	YES
		170102010202	Noxious Weed Trtmt-STWD	600	Acres	YES

PROJECT NAME	DIST	6TH CODE HUC (NRIS 2003)	ACTIVITY	OUT-PUT	UNIT	STWD
		100200050102	Habitat Enhancement-STWD	2000	Acres	YES
		100200050202	Stream Enhancement	1	Mile	YES
		100200050202	Stream Enhancement-STWD	15	Miles	YES
		100200050202	Trail Restoration	3	Miles	YES
		100200050202	Soil & Water Imprv STWD	105	Acres	YES
		100200050202	Travel Management STWD	270,000	Acres	YES
		100200050202	Trail Decommission STWD	8.5	Miles	YES
North Butte	D4	170102010202	Timber Sold, Salvage	10000	CCF	YES
		170102010202	Fuels Reduction, WUI	600	Acres	YES
		170102010202	Road Decommission	2	Miles	YES
		170102010202	Road Maintenance-STWD	12	Miles	YES
		170102010202	Abandoned Mine Rec STWD	5	Sites	YES
		170102010202	Noxious Weed Trtmt-STWD	1500	Acres	YES
		170102010202	Habitat Enhancement	300	Acres	YES
		170102010202	Habitat Enhancement-STWD	1500	Mile	YES
		170102010202	Stream Enhancement	2	Miles	YES
		170102010202	Stream Enhancement-STWD	5	Miles	YES
		170102010202	Fuel Reduction Other-STWD	9400	Acres	YES
Thompson Park	D4	170102010202	Timber Sold, Salvage	10000	CCF	YES
		170102010202	Fuels Reduction, WUI	500	Acres	YES
		170102010202	Road Maintenance	.5	Miles	YES
		170102010202	Road Maintenance -STWD	2	Miles	YES
		170102010202	Habitat Enhancement	200	Acres	YES
		170102010202	Habitat Enhancement-STWD	1000	Acres	YES
		170102010202	Stream Enhancement	1	Mile	YES
		170102010202	Stream Enhancement-STWD	8	Miles	YES
		170102010202	Noxious Weed Trtmnt-STWD	500	Acres	YES
		170102010202	Recreation Site Imprv -STWD	150	Acres	YES
		170102010202	Soil & Water Imprv-STWD	150	Acres	YES
		170102010202	Soil and Water Imprv.	10	Acres	YES
East Deerlodge	D8	170102010506	Timber Sold, Salvage	20000	CCF	YES
		170102010506	Habitat Enhancement	650	Acres	YES
		170102010506	Habitat Enhancement-STWD	2000	Acres	YES
		170102010506	Stream Enhancement	1	Mile	YES
		170102010506	Stream Enhancement-STWD	5	Miles	YES
		170102010506	Road Improvement	1.5	Miles	YES

PROJECT NAME	DIST	6TH CODE HUC (NRIS 2003)	ACTIVITY	OUT-PUT	UNIT	STWD
		170102010506	Road Improvement –STWD	10	Miles	YES
		170102010506	Soil & Water Improvement	10	Acres	YES
		170102010506	Soil & Water Imprv.-STWD	30	Acres	YES
		170102010506	Noxious Weed Trtmt	200	Acres	YES
		170102010506	Noxious Weed Trtmt -STWD	500	Acres	YES
		170102010506	Boundary line marked	5	Miles	YES
		170102021003	Noxious Weed Trtmt -STWD	2500	Acres	YES
		170102021003	Habitat Enhancement-STWD	2400	Acres	YES
		170102021003	Soil & Water Improvement	50	Acres	YES
		170102021003	Soil & Water Imprv.-STWD	150	Acres	YES
		170102021003	Stream Enhancement	2	Miles	YES
		170102021003	Stream Enhancement-STWD	8	Miles	YES
		170102021003	Road Decommission	1	Miles	YES
		170102021003	Road Decommission-STWD	4	Miles	YES
		170102010506	Fuel Reduction, WUI	200	Acres	YES
Battle Mountain	D2	100200040402	Timber Sold, Salvage	3000	CCF	NO
		100200040402	Fuels Reduction, WUI	400	Acres	NO
		100200040402	Noxious Weed Trtmt	400	Acres	NO
		100200040402	Stream Enhancement	2	Miles	NO
Roadside Salvage #2	D4 D7	170102010202	Timber sold, Salvage	6000	CCF	NO
		170102010202	Noxious Weed Trtmt	300	Acres	NO
Elk Park Sawmill	D4D7	100200060201	Timber Sold, Salvage	6200	CCF	YES
		100200060201	Fuels Reduction, WUI	150	Acres	YES
		100200060201	Noxious Weed Treatment	300	Acres	NO
		100200060105	Habitat Enhancement	400	Acres	YES
		100200060105	Habitat Enhancement-STWD	1000	Acre	YES
		100200060201	Stream Enhancement	.5	Miles	YES
		100200060201	Stream Enhancement-STWD	1.5	Miles	YES
		100200060201	Road Improvement	.5	Miles	YES
		100200060201	Soil & Water Imprv	5	Acres	YES
		100200060201	Soil & Water Imprv-STWD	15	Acres	YES
Rat Creek Fire	D2	100200040402	Timber Sold, Salvage	20000	CCF	NO
		100200040402	Noxious Weed Trtmt	400	Acres	NO
Z Bar Tee	D7	100200050205	Timber Sold, Salvage	1500	CCF	NO
			Fuels Reduction, WUI	28	Acres	NO

PROJECT NAME	DIST	6TH CODE HUC (NRIS 2003)	ACTIVITY	OUT-PUT	UNIT	STWD
2009						
Birch Willow	D1	100200041403	Timber Sold, Salvage	6000	CCF	YES
		100200041403	Fuels Reduction, WUI	200	Acres	YES
		100200041403	Habitat Enhancement	200	Acres	YES
		100200041403	Habitat Enhancement-STWD	1000	Acres	YES
		100200041403	Stream Enhancement	.5	Miles	YES
		100200041403	Stream Enhancement-STWD	3.5	Miles	YES
		100200041403	Road Improvement	3	Miles	YES
		100200041403	Road Improvement –STWD	9	Miles	YES
		100200041403	Trail Maintenance	25	Miles	YES
		100200041403	Trail Maintenance –STWD	25	Miles	YES
		100200041403	Abandoned Mine Reclamation	7	Sites	YES
		100200041403	Soil & Water Imprv	15	Acres	YES
		100200041403	Soil & Water Imprv –STWD	45	Acres	YES
Powerline Salvage #1	D4D7	100200060401	Timber Sold, Salvage	6000	CCF	NO
		100200060401	Fuels Reduction, WUI	300	Acres	NO
		100200060401	Road Maintenance	2.5	Miles	NO
Roadside Salvage #3	D4	170102010506	Timber Sold, Salvage	6000	CCF	NO
			Noxious Weed Treatment	200	Acres	NO
Bear Creek	D7	100200071301	Winter Range Restoration	3000	Acres	NO
2010						
Moulton Reservoir	D4	170102010403	Timber Sold, Salvage	3000	Acres	NO
		170102010403	Fuels Reduction, WUI	150	Acres	NO
		170102010403	Stream Enhancement	1	Miles	NO
		170102010403	Noxious Weed Trtmt	150	Acres	NO
		170102010403	Trail Replacement	5	Miles	NO
		170102010403	Road Improvement	.5	Miles	NO
		170102010403	Road Maintenance	1	Mile	NO
South Fk Divide	D4	100200041101	Timber Sold, Salvage	6000	CCF	YES
		100200041101	Fuels Reduction, WUI	300	Acres	YES
		170102010205	Habitat Enhancement	250	Acres	YES
		170102010205	Habitat Enhancement-STWD	1000	Acres	YES
		100200041101	Stream Enhancement	.5	Miles	YES
		100200041101	Stream Enhancement-STWD	1	Miles	YES

PROJECT NAME	DIST	6TH CODE HUC (NRIS 2003)	ACTIVITY	OUT-PUT	UNIT	STWD
		100200041101	Noxious Weed Trtmt -STWD	300	Acres	YES
		100200041101	Soil & Water Imprv –STWD	35	Acres	YES
		100200041101	Soil & Water Imprv	10	Acres	YES
Timber Creek	D6	100200030108	Timber Sold	2000	CCF	NO
		100200030108	Fuels Reduction, WUI	300	Acres	NO
		100200030108	Road Maintenance, Hi Clear.	5	Miles	NO
		100200030108	Habitat Enhancement	400	Acres	NO
		100200030108	Noxious Weed Trtmt	400	Acres	NO
Lockhart Meadow	D7	100200060104	Timber Sold, Salvage	11000	CCF	YES
		100200060104	Fuels Reduction, WUI	600	Acres	YES
		100200060103	Habitat Enhancement	200	Acres	YES
		100200060103	Habitat Enhancement-STWD	1000	Acres	YES
		100200060104	Stream Enhancement	1	Mile	YES
		100200060104	Stream Enhancement-STWD	3	Miles	YES
		100200060104	Noxious Weed Trtmt -STWD	600	Acres	YES
		100200060104	Road Maintenance	1	Mile	YES
		100200060104	Road Maintenance -STWD	7	Miles	YES
		100200060104	Soil & Water Imprv	5	Acres	YES
Johnson Creek	D3	100200040902	Timber Sold, Salvage	4000	CCF	YES
		100200040902	Fuels Reduction, Other	200	Acres	YES
		100200041201	Habitat Enhancement	250	Acres	YES
		100200044201	Habitat Enhancement-STWD	1000	Acres	YES
		100200040902	Stream Enhancement	1	Mile	YES
		100200040902	Stream Enhancement-STWD	3	Miles	YES
		100200040902	Noxious Weed Trtmt	200	Acres	YES
		100200040902	Road Maintenance	.5	Miles	YES
		100200040902	Road Maintenance -STWD	3	Miles	YES
		100200041201	Soil & Water Imprv –STWD	15	Acres	YES
		1002000412012	Soil & Water Imprv	5	Acres	YES
Powerline Salvage #2	D4	100200060302	Timber Sold, Salvage	6000	CCF	NO
		100200060302	Fuels Reduction, WUI	300	Acres	NO
		100200060302	Noxious Weed Trtmt	300	Acres	NO
		100200060302	Road Maintenance	2	Miles	NO
Rader Creek	D7	100200050204	Timber Sold, Salvage	4000	CCF	NO

PROJECT NAME	DIST	6TH CODE HUC (NRIS 2003)	ACTIVITY	OUT-PUT	UNIT	STWD
		100200050204	Road Improvement	2	Miles	NO
		100200050204	Habitat Impv	200	Acres	NO
		100200050204	Noxious Weed Trtmt	300	Acres	NO
		100200050205	Timber Sold, Salvage	4000	CCF	NO
		100200050205	Noxious Weed Trtmt	300	Acres	NO
		100200050205	Fuel Reduction, WUI	600	Acres	NO

APPENDIX E - VEGETATION MANAGEMENT PRACTICES

Vegetation management practices available for the primary coniferous forest types on the forest are described below, as required in CFR 219.15. The conditions and circumstances for selecting a practice are outlined. Planting and timber stand improvement practices are only applicable to suitable timber lands where timber production is the purpose for the activity.

These practices are general guidelines. The final decision for the vegetative management practice (silvicultural system) chosen for each vegetative type and circumstance shall be made by a certified silviculturist using guidance in this Appendix, a review of applicable technical and scientific literature, and practical experience. Using this knowledge, the silviculturist will evaluate the practice for relevance to the specific vegetation and site condition. Additional practices may be dictated by other resource goals, particularly in riparian areas.

Harvest Systems

Managed forest lands include five general vegetative types. Each vegetative type provides several options for harvest systems depending on site conditions, phonological characteristics of individual species and management goals. Appropriate harvest systems for each type are as follows:

Lodgepole Pine

These sites generally occur on alpine fir or Douglas-fir climax habitats. Sites are generally dominated by pure or nearly pure lodgepole pine stands.

Clearcut – Where timber production is the primary goal for the area, and lodgepole pine is the desired management species, clearcutting may be used. Lodgepole pine is very shade tolerant and produces maximum seed germination and growth in full sunlight conditions.

Shelterwood – This harvest method may be used where conversion to more shade tolerant species such as Spruce or Douglas-fir is desirable, and where shelter is necessary to protect regeneration. Lodgepole pine will generally not be retained as shelter trees due to its; high susceptibility for windthrow.

Seedtree – Harvest may occur on sites where conversion to more tolerant species is desireable. In these cases residual seed trees will generally be spruce or Douglas-fir. Lodgepole pine may be retained as seed trees on sites where cone serotony is poor and sufficient seed is not present in the logging slash to adequately regenerate the site following harvest. Due to the high susceptibility of lodgepole pine seedtrees to windthrow, this method should be used where the risk is low. Lodgepole pine containing seed bearing cones may be retained as seed trees on stands wehre broadcast burning is used to dispose of slash. This method may be used as a one-shot attempt to establish

natural regeneration as seedtrees will normally be killed by the fire. These sites should be scheduled for planting if first year regeneration surveys do not show adequate stocking.

Selection/Group Selection/Commercial Thinning – Lodgepole pine types are generally not well suited for unevenaged silvicultural systems where lodgepole pine is the desired species of regeneration. Hormonal response to shaded sunlight prevents germination of lodgepole pine seed and restricts root growth in existing trees in shaded or partially shaded conditions. These methods may be used where other resource goals dictate continuous site occupancy with trees and where conversion to more tolerant species is desirable or acceptable.

Douglas-fir

These stands generally occur on Douglas-fir climax habitats and are characterized by species compositions ranging from a mixture of Douglas-fir and lodgepole pine to pure Douglas-fir.

Clearcut – This harvest method may be used on sites where existing stands do not contain sufficient suitable seed or shelter trees. This may occur due to disease, infestation with insects or genetic undesirability of available trees. Sites harvested using this method will generally be scheduled for planting.

Shelterwood – This harvest method will generally be used on sites where the retention of shelter trees is necessary to protect regeneration from excessive drying of the site or where continuous site occupancy with trees is necessary to protect other resource values. Where timber production is the primary goal of the area, the shelter trees will generally be removed after the regeneration is well established (10 to 20 years). Douglas-fir is considered a moderately shade intolerant species and produces greater growth under full sunlight conditions. On sites where the shelter trees are retained to protect other resource values, shelter trees may be retained on the site for a longer period of time, or not removed at all.

Seedtree – This harvest method will be used on sites where the retention of shelter trees is not necessary to protect regeneration or other resource values. The retention of seedtrees provides seed for natural regeneration while retaining near full sunlight conditions to maximize growth. Seed trees will generally be removed from the site after sufficient desirable regeneration is established.

Selection/Group Selection/Commercial Thinning – On very dry or harsh sites where regeneration of the site is difficult and stockability is low, selection harvest may be the most appropriate method of assuring continued regeneration of the site. These systems may also be used where other resource goals dictate continuous site occupancy with trees, and where full stocking of stands is not required.

Spruce/Sub-alpine fir/Whitebark pine

These stands generally occur on relatively high elevation sub-slpine fir climax habitat types and are characterized by a species mixture of sub-alpine fir, spruce, and whitebark pine. These sites often are not suited for regulated timber management due to harsh site conditions but may be managed where adequate site protection and regeneration can be assured or to meet other resource goals.

Clearcut, Shelterwood, Seed tree – Even aged harvest may be used to manage these sites where individual site and stand conditions allow and successful regeneration is likely to occur.

Selection/Group Selection/Commercial Thinning – On harsh sites where regeneration of the site is difficult and stockability is low, selection harvest may be the most appropriate method of assuring continued regeneration of the site. These systems may also be used where other resource goals dictate continuous site occupancy with trees, and where full stocking of stands is not required.

Riparian

These areas occur along streams and wet meadows. Existing stand conditions are highly variable, ranging from even-aged lodgepole stands to all-aged, multi-storied, mixed species stands. Harvest treatments will be designed to maintain natural conditions, protect riparian values, and to provide recruitment of trees to streams for pool development where appropriate.

Selection/Group Selection – These harvest methods will be used in riparian areas to manage the timber resource while protecting other resource values. Selection harvest may be used where the desired management species is shade tolerant and regeneration of that species is likely to occur. On sites where the desired management species is shade intolerant, such as lodgepole pine, group selection will generally be used to create conditions favorable for regeneration and growth. Group selection units will generally not exceed five acres in size.

Clearcut, Shelterwood, Seedtree – Even-aged systems will normally not be utilized in riparian areas. Exceptions may occur where other resource goals dictate removing the trees and riparian values can be adequately protected.

Quaking Aspen

These stands occur in riparian zones, in open sagebrush grasslands and intermingled with conifer stands. Quaking aspen regenerates primarily from root sprouts (suckers). Aggregations of raments (above ground stems) result from surviving root sprouts. Root sprouts are usually stimulated when above ground ramets are suppressed or removed thus removing apical dominance by auxins produced in the crowns from inhibiting the underground stem from sprouting. Heat of fires also stimulates root sprouting. Successful aspen ramets are intolerant of shade.

Clearcut - Where an aspen stand has declined due to insect or disease, even aged regeneration may be attempted by clearcutting.

Selection -Where the above ground ramets are generally free of pathogens and in sound physiological condition but are undergoing encroachment by various coniferous species subjecting the clone to competition for light, nutrients and moisture removal of the competitive stress by girdling encroaching conifers, falling and leaving encroaching conifers, or falling and removal when damage to the residual aspen ramets can be minimized are appropriate practices. Removal of conifers from a perimeter surrounding an existing aspen clone often allows the clone to expand into the space. Thus removal of

conifers surrounding an aspen clone by clearcutting is an acceptable practice for aspen regeneration.

Other - Where browsing pressure is identified as inhibiting the development of aspen ramets producing an ungulate barrier may be desirable. Prescribed burning to stimulate root suckering and reduce pathogens is an acceptable practice.

Site Preparation/Slash Disposal

Site preparation/slash disposal will be scheduled for harvested units where logging slash creates an untenable fire hazard and/or where site conditions inhibit reforestation efforts. Methods of site preparation/slash disposal include the following:

Tractor Piling – will generally be scheduled following harvest on sites where slopes are less than 45% and soils are not sensitive to erosion or compaction.

Hand Piling – will generally be scheduled on harvested units containing sensitive soils or hwere small unit size makes hand piling more cost efficient than other methods.

Trampling – may be used on sites where logging slash will not create an undue fire hazard and trampling will accomplish adequate site preparation to allow the prescribed type of regeneration.

Broadcast Burning – may be used on sites where other methods are not feasible due to slopes exceeding 45% or on sensitive soils where mechanical methods would crate undue soil disturbance or compaction.

YUM Yarding – Yarding of unmerchantable material may be appropriate where whole tree yearding is planned or where other methods will cause undue soil disturbance.

Jackpot Burning – may be used where fuels are scattered and site preparation is adequate to provide for regeneration.

Herbicide Treatment – may be used where competing vegetation precludes regeneration and mechanical methods of removing the competing vegetation are infeasible or cost prohibitive. Herbicides will be applied under an approved environmental analysis and disclosure document like the BDNF 2002 Noxious Weed Management Plan FEIS and Record of Decision.

Reforestation

Natural Regeneration – will be the primary system of reforestation on the forest

Planting – will generally only be scheduled on forested sites where natural regeneration is desired but unlikely to occur within five years of final harvest. Site conditions which generally indicate the need for planting include but are not limited to the following:

1. Following clearcut harvest on Douglas-fir sites where Douglas-fir is the desired regenerated species.

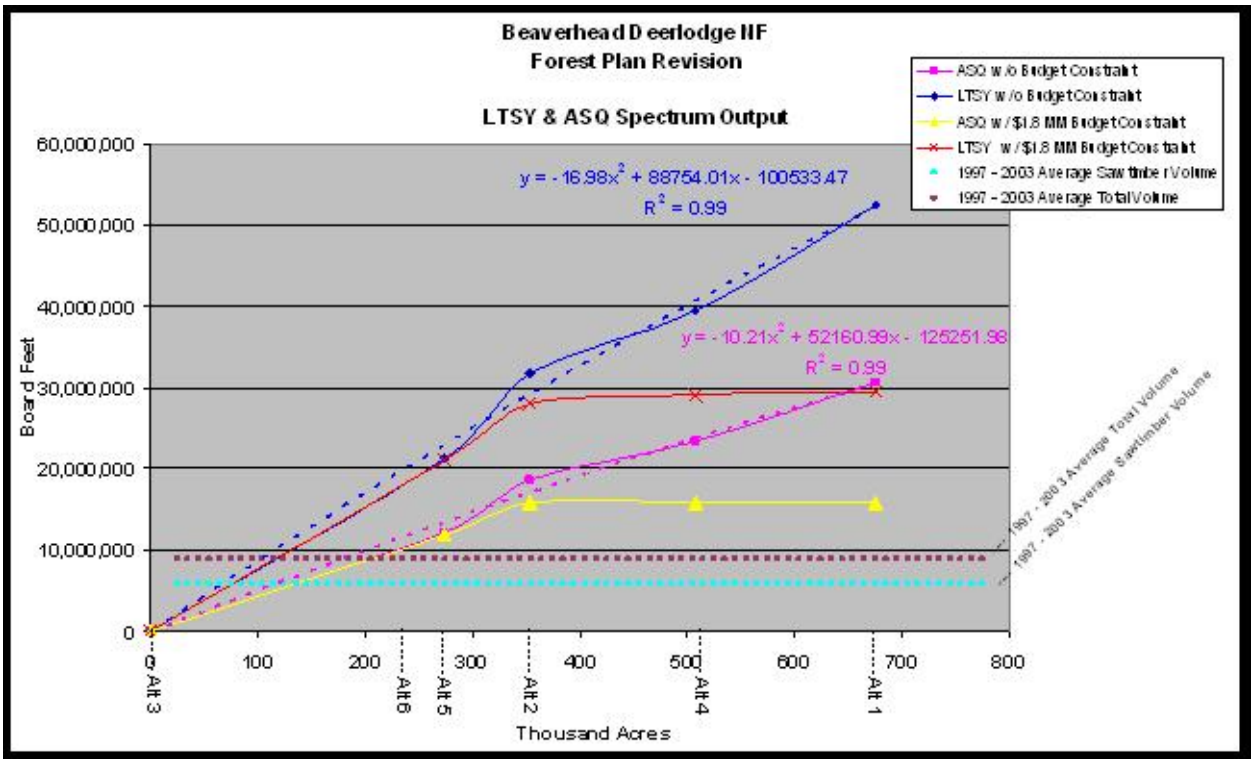
2. Following clearcut harvest on Lodgepole pine sites where cone serotony is poor or sites must be broadcast burned to dispose of logging slash due to steep slopes.
3. Following shelterwood harvest where natural regeneration is not expected within five years due to harsh site conditions.
4. Where third year regeneration surveys indicate that natural regeneration will not result in adequate stocking within five years of final harvest..

Timber Stand Improvement

Precommercial thinning, cleaning, release and weeding may be used on seedling/sapling sized stands allocated as suitable timber lands. Treatments will be designed to reduce overstocking to increase growth, remove diseased, damaged, or genetically inferior trees or to control species composition. Treatment will be scheduled prior to growth loss due to stagnation but after the possibility of significant ingrowth has past, generally between twenty and thirty years of stand age. Residual stocking levels, species preference and timing of treatment will be specific in the silvicultural prescription.

APPENDIX F - TIMBER HARVEST CAPACITY PROJECTIONS

SPECTRUM software was used as a timber harvest scheduling tool, reporting long term sustained yield (LTSY) and allowable sale quantity (ASQ) for alternatives 1-5 as well as the benchmark calculations (Chapter 2). Based on 2004 SPECTRUM runs, the maximum timber benchmark has an allowable sale quantity (ASQ) of 766 MMBF in decade 1 (76.6 MMBF/year), with harvest occurring on 82,693 acres. LTSY and ASQ, constrained by estimated budget projections, were calculated for Alternative 6 based on the following graphed data and calculations



APPENDIX G - GRIZZLY BEAR AND LYNX MANAGEMENT DIRECTION

Grizzly G-2 / Lynx G-72

UNITED STATES
DEPARTMENT OF
AGRICULTURE

FOREST SERVICE

APRIL 2006

FOREST PLAN AMENDMENT FOR GRIZZLY BEAR HABITAT CONSERVATION FOR THE GREATER YELLOWSTONE AREA NATIONAL FORESTS

RECORD OF DECISION

BEAVERHEAD-DEERLODGE NATIONAL FOREST
BRIDGER-TETON NATIONAL FOREST
CARIBOU-TARGHEE NATIONAL FOREST
CUSTER NATIONAL FOREST
GALLATIN NATIONAL FOREST
SHOSHONE NATIONAL FOREST

COUNTIES IN IDAHO
BEAR LAKE, BONNEVILLE, CARIBOU, CLARK, FRANKLIN, FREMONT, MADISON, AND TETON
COUNTIES IN MONTANA
BEAVERHEAD, CARBON, GALLATIN, MADISON, PARK, STILLWATER, AND SWEET GRASS
COUNTIES IN WYOMING
FREMONT, HOT SPRINGS, LINCOLN, PARK, SUBLETTE, AND TETON



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Abstract: The Forest Service is amending six forest plans on six Greater Yellowstone Area national forests (Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer, Gallatin, and Shoshone National Forests) to incorporate the habitat standards and other relevant provisions in the Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area. Amended forest plans are the 1986 Beaverhead Forest Plan, the 1990 Bridger-Teton National Forest Land and Resource Management Plan, the 1997 Revised Forest Plan—Targhee National Forest, the 1987 Custer National Forest and Grasslands Land and Resource Management Plan, the 1987 Gallatin National Forest Plan, and the 1986 Shoshone National Forest Land and Resource Management Plan. The purpose and need for the amendments is to ensure conservation of habitat to sustain the recovered grizzly bear population, update the management and monitoring of grizzly bear habitat, provide consistency among Greater Yellowstone Area national forests in managing grizzly bear habitat, and ensure the adequacy of regulatory mechanisms for grizzly bear habitat protection upon delisting as identified in the Grizzly Bear Recovery Plan. This Record of Decision presents the three principal reasons the responsible officials selected Alternative 2-Modified described in the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Six Greater Yellowstone Area National Forests Final Environmental Impact Statement. Additionally, this decision document describes the public involvement process and issues and other alternatives considered; it explains legally required findings and administrative review procedures. The amendment to the six forest plans is contained in the appendix.

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For Information Contact:	Mr. Kim Barber Shoshone National Forest 808 Meadow Lane Avenue Cody, WY 82414-4549 Telephone 307.527.6241 This document is available on the Internet at http://www.fs.fed.us/r1/wildlife/igbc/Subcommittee/yes/YEamend/gb_internet.htm

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Preface

This Record of Decision describes our decision to approve Alternative 2-Modified from the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement.

This Record of Decision has two purposes. First, it is a legal document detailing a formal decision from a government agency. Second, it explains why the decision was made.

We want to thank all of the 55,000+ people that provided comments during the development of this amendment. Your comments helped guide the development of the amendment's components. When implemented, this amendment and the supporting documents will shape the management of grizzly bear habitat for many years.

Our decision strikes a balance that sustains a recovered grizzly bear population in the Greater Yellowstone Area while retaining public enjoyment and economic uses of these public lands.

While the management direction in this amendment provides a firm foundation for grizzly bear habitat management, we recognize that habitat management is dynamic and new information is constantly being developed. The selected alternative embraces an adaptive management approach—as conditions change, so will management direction. Any necessary changes, based on monitoring and evaluation, will involve public collaboration.

Again, thank you for your interest in grizzly bear habitat conservation and in the management of your national forests.

Sincerely,

Bruce Ramsey, Forest Supervisor, Beaverhead-Deerlodge National Forest

Carole 'Kniffy' Hamilton, Forest Supervisor, Bridger-Teton National Forest

Lawrence A. Timchak, Forest Supervisor, Caribou-Targhee National Forest

Nancy T. Curriden, Forest Supervisor, Custer National Forest

Rebecca Heath, Forest Supervisor, Gallatin National Forest

Rebecca Aus, Forest Supervisor, Shoshone National Forest

Part 1 Introduction

1.1 About this document

This Record of Decision is organized into eight parts.

- *Part 1—Introduction.* This part includes information about the Greater Yellowstone Area, a summary of the history of grizzly bear conservation in the Greater Yellowstone Area, and describes the purpose and need for action.
- *Part 2—Decision.* The decision and a summary of direction in the selected alternative are presented in part 2.
- *Part 3—Reasons for the Decision.* In this part, the three principal reasons for the decision are described.
- *Part 4—Implementation.* Part 4 includes information about the implementation of the amendment and the delisting process.
- *Part 5—Public Involvement and Issues.* The public involvement process, a summary of public comment, a description of government consultation, and the issues are included in part 5.
- *Part 6—Alternatives Considered.* This part describes the alternatives considered in the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement.
- *Part 7—Legally Required Findings.* Part 7 lists the laws and regulations that were considered during the process.
- *Part 8—Administrative Review.* Administrative review procedures are described in part 8.

The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests, baseline values and other relevant data, and a list of criteria and definitions used in the amendment are included in the appendix.

1.2 Setting

Since the 1960s, the Greater Yellowstone Area has been acknowledged as an ecosystem that extends beyond the core of Yellowstone National Park. The Greater Yellowstone Area is approximately 18 million acres of public and private lands. Public lands comprise about 76 percent, or 13.6 million acres, of the Greater Yellowstone Area, including six national forests, two national parks, two national wildlife refuges, Bureau of Land Management and Bureau of Reclamation lands, and state and tribal lands. The Greater Yellowstone Area is in the states of Idaho, Montana, and Wyoming.

Public lands are concentrated around the Yellowstone Plateau. Geographically, the Greater Yellowstone Area includes the headwaters of the Missouri-Mississippi, Snake-Columbia, and Green-Colorado River systems and 14 surrounding mountain ranges.

Grizzly bear conservation in the Greater Yellowstone Area

In 1975, the U.S. Fish and Wildlife Service listed the grizzly bear as a threatened species in the lower 48 states, placing the species under federal protection under the Endangered Species Act of 1973, as amended[1].

Since listing, government agencies have worked to improve habitat conditions, minimize grizzly bear/human conflicts and grizzly bear mortality, and increase public awareness and appreciation for the grizzly bear in the Greater Yellowstone Area. In 1975, land management agencies in the Greater Yellowstone Area initiated an effort to develop consistent management direction for grizzly bears. In 1983, the Interagency Grizzly Bear Committee was formed to coordinate management and research actions more effectively for recovery of grizzly bears in different ecosystems, and the Yellowstone

[1] In this Record of Decision, all references to the Endangered Species Act of 1973 are to the Endangered Species Act of 1973, as amended.

Ecosystem Subcommittee was created to coordinate management of the Yellowstone grizzly bear habitat and population. The 1982 and 1993 Grizzly Bear Recovery Plans (Recovery Plan) were developed to identify actions necessary for the conservation and recovery of the grizzly bear. The Recovery Plan[2] defined a recovered grizzly bear population as one that could sustain a defined level of mortality and that is well distributed throughout the recovery zone.

In 2003, the Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area (Conservation Strategy) was developed to be the document guiding management and monitoring of the Yellowstone grizzly bear population and its habitat upon recovery and delisting. The Conservation Strategy describes the Primary Conservation Area for grizzly bears, which is the same area as the recovery zone identified in the Recovery Plan. The Primary Conservation Area for the grizzly bear in the Greater Yellowstone Area is approximately 5,893,000 acres in size and includes portions of the six national forests, two national parks, and other intermingled lands (Figure 1).

The states of Idaho, Montana, and Wyoming developed state grizzly bear management plans that were incorporated as integral parts of the Conservation Strategy. These state grizzly bear management plans recommend and encourage land management agencies to maintain or improve habitats that are important to grizzly bears in areas biologically suitable and socially acceptable for grizzly bears and to monitor habitat conditions in those areas.

Decades of interagency management efforts resulted in the grizzly bear population's increasing from an estimated 200 bears to current estimates of 500 to 600 bears. The U.S. Fish and Wildlife Service reviewed the status of the Yellowstone grizzly bear population under the Endangered Species Act and the Proposed Rule to delist the Yellowstone grizzly bear population has been published in the Federal Register. The Status Review determined adequate regulatory mechanisms are in place to delist the grizzly bear if the habitat standards in the Conservation Strategy are incorporated into the National Park Service's Superintendent's Compendium for each affected national park and if current forest plans for each of the six Greater Yellowstone Area national forests are amended before the Rule is finalized.

1.3 The purpose and need for action

The management of grizzly bear habitat on national forests in the Greater Yellowstone Area is a dynamic process. Experience provides the public and land managers with understanding and insights regarding the conservation of grizzly bear habitat. Scientific research continues to bring forth new theories, observations, and findings relevant to the management of these resources. This learning is continuous. Most importantly, the Yellowstone grizzly bear population has increased over the past 25 years to the point where all established[3] demographic recovery targets have been met or exceeded since 1998 and the Yellowstone grizzly bear population is in the process of being delisted.

The purpose of these amendments is to:

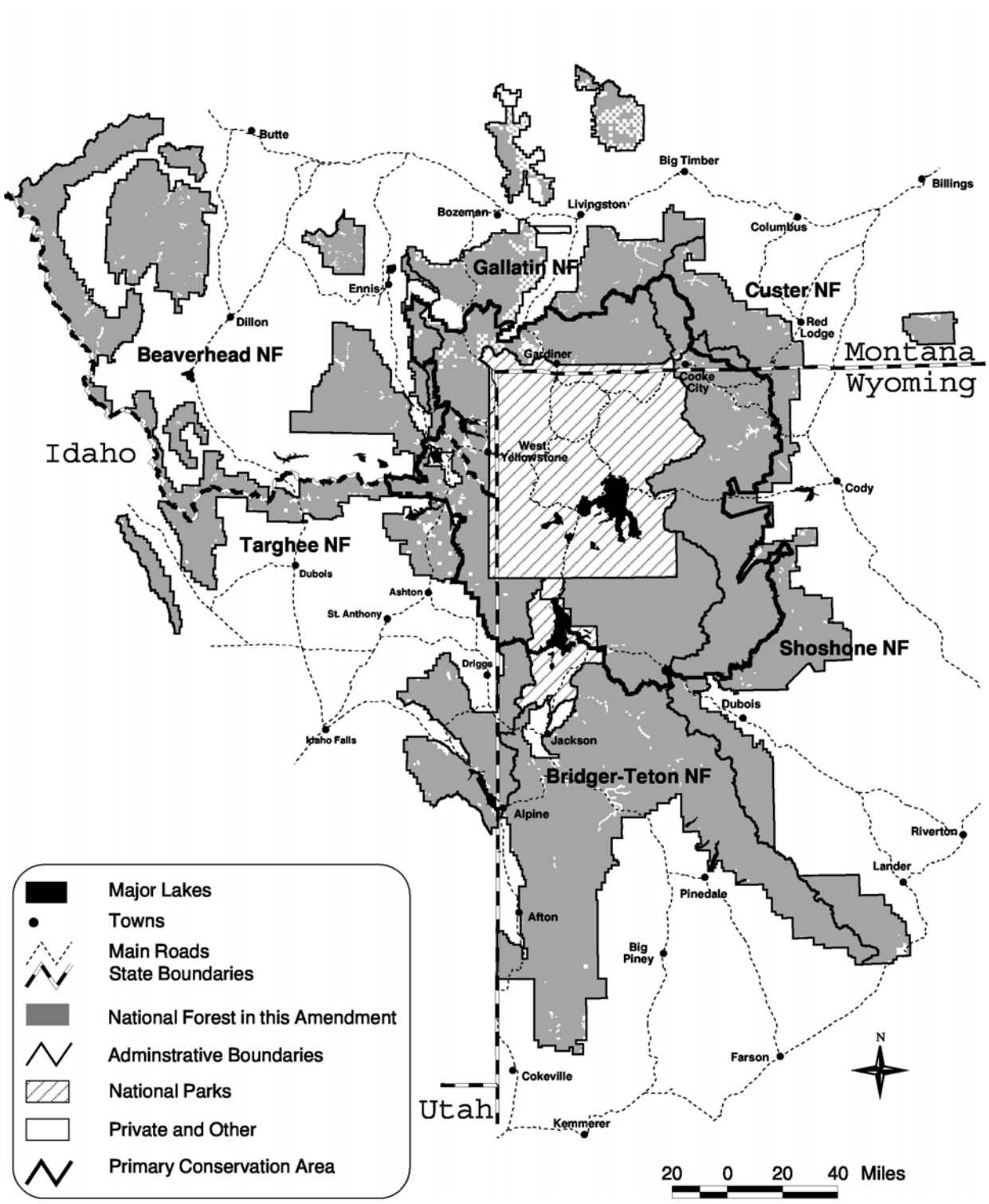
- Ensure conservation of habitat to sustain the recovered Yellowstone grizzly bear population
- Update the management and monitoring of grizzly bear habitat to incorporate recent interagency recommendations and agreements, as described in the Conservation Strategy
- Improve consistency among Greater Yellowstone Area national forests in managing grizzly bear habitat
- Ensure the adequacy of regulatory mechanisms for grizzly bear habitat protection upon delisting as identified in the Recovery Plan

[2] The 1993 Recovery Plan is a revised and updated version of the original Recovery Plan, published in 1982. Throughout this document, any reference to the Recovery Plan is to the 1993 version, unless otherwise stated.

[3] The Yellowstone Ecosystem Subcommittee has approved new analysis protocols, developed by the Interagency Grizzly Bear Study Team, for estimating total population and mortality limits from all causes (IGBST 2005). This new method is a more comprehensive mortality management approach and is derived from a more accurate model for establishing sustainable mortality limits for grizzly bear populations. The U.S. Fish and Wildlife Service will incorporate this new methodology into the Grizzly Bear Recovery Plan and append this to the Conservation Strategy before making its final determination on the Rule to delist the grizzly bear.

The six national forests included in this proposal are the Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer (Beartooth Ranger District), Gallatin, and Shoshone National Forests with a total area of about 13 million acres within proclaimed boundaries (Figure 1).

Figure 1. The six Greater Yellowstone Area national forests and the Primary Conservation Area boundary.



Part 2 Decision

2.1 Introduction

The foundation for our decision is the analysis of alternatives documented in the Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement and public comment during scoping and on the Draft Environmental Impact Statement. Our decision incorporates by reference the analysis of effects and management direction disclosed in the Final Environmental Impact Statement and the planning record in its entirety. All references and citations used in this Record of Decision are fully described in the Final Environmental Impact Statement.

Our decision applies only to National Forest System lands in the six Greater Yellowstone Area national forests. It does not apply to any other federal, state, or private lands, although the effects of our decision on those lands were considered. The geographic area of interest for the selected alternative is National Forest System lands inside and outside the Primary Conservation Area (Figure 1).

The forest plan amendment for grizzly bear habitat conservation establishes the framework for future decision making by outlining direction for sustaining a recovered grizzly bear population. The selected alternative is programmatic in nature and guides implementation of site-specific projects that tier to forest plans. Additional National Environmental Policy Act compliance is required for site-specific projects.

Reconsideration of other goals, objectives, land allocations, and other direction in a forest plan are not part of the selected alternative, but may be addressed when forest plans are revised. We find this amendment is not significant under the National Forest Management Act regulations as described in part 7.

2.2 The decision

We have selected Alternative 2-Modified to amend the six national forest plans. By selecting Alternative 2-Modified, we are approving management direction that maintains the integrity of grizzly bear habitat in the Greater Yellowstone Area, establishes consistent management direction, and sustains a recovered Yellowstone grizzly bear population.

Our decision strikes a balance between competing demands expressed by many people: a sustainable, recovered grizzly bear population in the Greater Yellowstone Area balanced with public enjoyment and economic reliance on these public lands. In making our decision, we used the best available science in conjunction with public comments. In addition to the habitat standards in the Conservation Strategy, our decision adds guidance to provide assurances that many grizzly bear habitat management efforts that have been ongoing will continue. These additions include guidance inside and outside the Primary Conservation Area for food storage regulations, information and education, grizzly bear/human and grizzly bear/livestock conflict management, monitoring of secure habitat outside the Primary Conservation Area, and maintenance of key grizzly bear food sources.

This decision incorporates adaptive management and monitoring and continued active government coordination through the agreement in the Conservation Strategy. This adaptive strategy offers an avenue to describe and evaluate the consequences of changing conditions and new knowledge. Monitoring and additional analyses will be used to shape future management actions within the framework of the amended forest plans.

We selected Alternative 2-Modified because it conserves grizzly bear habitat, acknowledges the social and economic values of local communities, and allows us to work with others to monitor and adapt management. Further, it meets the purpose and need and responds to the issues. For further discussion on

these issues, see part 5. Alternative 2-Modified is summarized in Figure 2 and described in detail in the appendix[4].

Figure 2. The direction and guidance in Alternative 2-Modified. Wording in italics was added to the proposed action between the Draft and Final Environmental Impact Statements to create Alternative 2-Modified in response to public comment

Goals, Standards, Guidelines, and Monitoring Items
Goal Manage grizzly bear habitat within the Primary Conservation Area to sustain the recovered Yellowstone grizzly bear population. *Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, accommodate grizzly bear populations to the extent that accommodation is compatible with the goals and objectives of other uses.*
Standard 1—Secure Habitat Inside the Primary Conservation Area, maintain the percent of secure habitat in Bear Management Unit subunits at or above 1998 levels. Projects that change secure habitat must follow the Application Rules.
Standard 2—Developed Sites Inside the Primary Conservation Area, maintain the number and capacity of developed sites at or below 1998 levels, with the following exceptions: any proposed increase, expansion, or change of use of developed sites from the 1998 baseline in the Primary Conservation Area is analyzed and potential detrimental and positive impacts on grizzly bears are documented through a biological evaluation or assessment. Projects that change the number or capacity of developed sites must follow the Application Rules.
Standard 3—Livestock Grazing Inside the Primary Conservation Area, do not create new active commercial livestock grazing allotments, do not increase permitted sheep animal months from the identified 1998 baseline, and phase out existing sheep allotments as opportunities arise with willing permittees.
Standard 4 *Standard 4 was dropped from Alternative 2-Modified. The intent of Standard 4—to no longer manage by Management Situation areas or use the Interagency Grizzly Bear Guidelines—is stated in this Record of Decision.*
Standard 5—Nuisance Bears Coordinate with state wildlife management agencies to apply Conservation Strategy nuisance bear standards.
Standard 6—Food Storage *Inside the Primary Conservation Area, minimize grizzly bear/human conflicts using food storage, information and education, and other management tools.*
Guideline 1—Winter Motorized Access Inside the Primary Conservation Area, use localized area restrictions to address conflicts with winter use activities, where conflicts occur during denning or after bear emergence in the spring.

[4] Standards and guidelines are numbered here and in the Final Environmental Impact Statement. Numbers were dropped in the appendix describing final direction for grizzly bear management.

Goals, Standards, Guidelines, and Monitoring Items
Guideline 2—Livestock Grazing *Inside the Primary Conservation Area, cattle allotments or portions of cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, livestock allotments or portions of allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees.*
Guideline 3—Food Storage *Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, emphasize proper sanitation techniques, including food storage orders, and information and education, while working with local governments and other agencies.*
Guideline 4—Food Sources *Inside and outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area.*
Monitoring Item 1—Secure Habitat and Motorized Access Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: secure habitat, open motorized access route density greater than one mile per square mile, and total motorized access route density greater than two miles per square mile in each Bear Management Unit subunit on the national forest. *Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, monitor, and submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in secure habitat by national forest every two years.*
Monitoring Item 2—Developed Sites Inside the Primary Conservation Area, monitor, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in the number and capacity of developed sites on the national forest, and compare with the 1998 baseline.
Monitoring Item 3—Livestock Grazing Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: the number of commercial livestock grazing allotments on the national forest and the number of permitted domestic sheep animal months. *Inside and outside the Primary Conservation Area, monitor and evaluate allotments for recurring conflicts with grizzly bears.*
Monitoring Item 4—Habitat Effectiveness Inside the Primary Conservation Area, monitor, and *every five years* submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in seasonal habitat effectiveness in each Bear Management Unit and subunit on the national forest through the application of the Cumulative Effects Model or the best available system and compare outputs to the 1998 baseline. Annually review Cumulative Effects Model databases and update as needed. When funding is available, monitor representative non-motorized trails or access points where risk of grizzly bear mortality is highest.

Goals, Standards, Guidelines, and Monitoring Items
Monitoring Item 5—Whitebark Pine *Monitor whitebark pine occurrence, productivity, and health inside and outside the Primary Conservation Area in cooperation with other agencies. Annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: results of whitebark pine cone production from transects or other appropriate methods, and results of other whitebark pine monitoring.*

2.3 Decision authority

The authority for this decision, under 36 CFR 219.10(f), belongs to the forest supervisors of the six Greater Yellowstone Area national forests.

Part 3 Principal reasons for the decision

Our decision to select Alternative 2-Modified for implementation is based on the three principal reasons.

1. Habitat is conserved to sustain the recovered Yellowstone grizzly bear population

2. Local communities and social and economic values are acknowledged and public safety is emphasized

3. Federal, state, local, and tribal governments work together to monitor and adapt to changing conditions and new science

The reasons for our decision are described in the following sections.

3.1 Principal reason 1 - habitat is conserved to sustain the recovered Yellowstone grizzly bear population

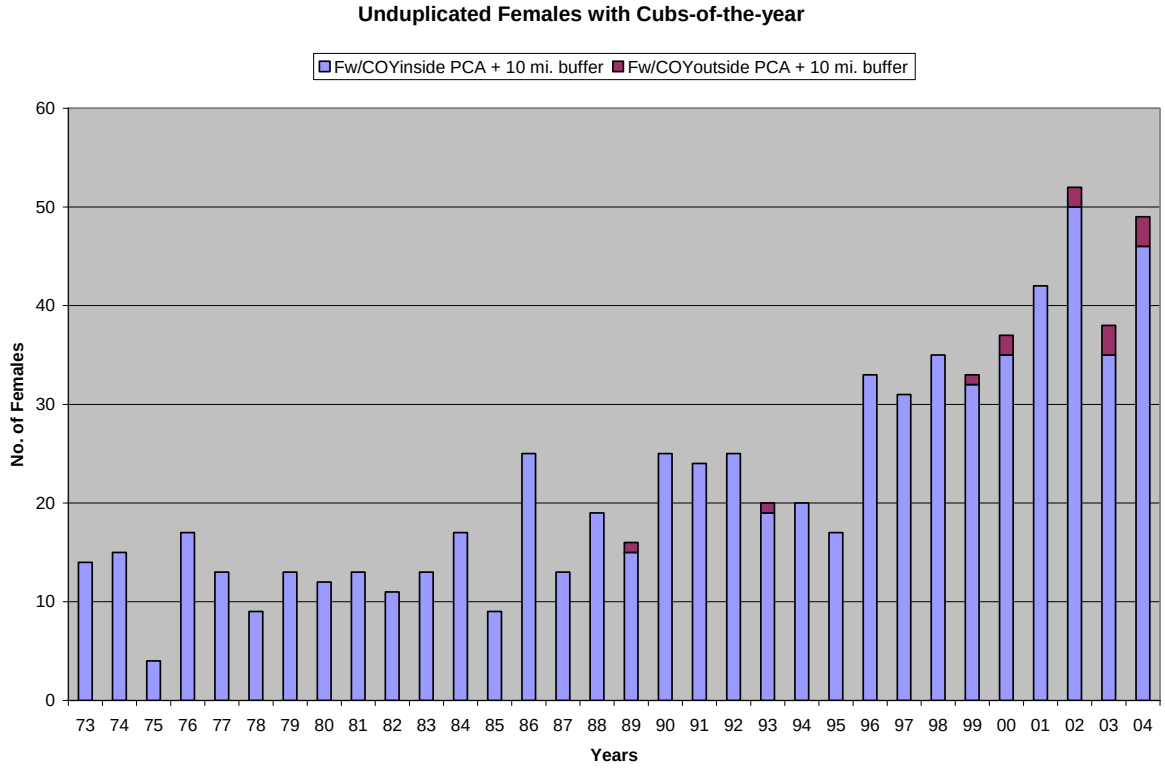
Habitat loss and uncontrolled human-caused mortality have been the primary reasons for the elimination of bears from much of their former range. How and where bears use existing habitat is primarily a function of seasonally available foods moderated or precluded by the presence of humans. The majority of grizzly bear mortality is attributable to grizzly bear/human conflicts with a common outcome of bear mortality by either interagency bear managers or by other humans. In addition to mortality concerns, it is important to provide secure habitat (areas free of motorized access) so bears are able to fully utilize the available resources. Human presence can limit bear use of habitat, create tolerance among some bears that allows for interaction at great risk to both humans and bears, or attract bears to unnatural or unsecured food sources. This increases the risks of habituation to unnatural foods and human conflict. Maintenance of adequate habitat and associated important foods, along with management of human activities within the habitat, are key for the long-term sustainability of grizzly bear populations.

Maintaining habitat to ensure the recovery of the Yellowstone grizzly bear population has been a cooperative goal of the national forests, national parks, state wildlife management agencies, and the U.S. Fish and Wildlife Service in the Greater Yellowstone Area since the listing of the grizzly bear as a threatened species in 1975. Habitat management efforts on National Forest System lands, including seasonal and permanent motorized access restrictions, closure of many sheep allotments, provisions in livestock grazing and special use permits, food storage orders, installation of bear resistant facilities, information and education materials and programs, and the development of coordinated direction for management of forest resources have been instrumental in the recovery of this bear population.

Current information indicates this population of grizzly bears is growing at approximately 4 to 7 percent or more annually. The grizzly bear has increased its distribution in the Greater Yellowstone Area by almost 50 percent since the 1970s; expansion is expected to continue. All of the current information (i.e., number of unduplicated females, distribution of reproducing females, distribution of bears, informal sightings by agency personnel, and areas where nuisance bears are being managed) indicates this population has increased in both the number of bears and the geographic area they occupy. Figure 3 and Figure 4 display the increase in number and distribution of one of the most important factors of the

grizzly bear population: females with cubs-of-the-year. Existing habitat conditions—basically unchanged since 1998—have allowed for a recovered grizzly bear population that is increasing, expanding, and exceeding established demographic recovery targets. Consequently, maintaining habitat quality and quantity at current conditions is sufficient to support the recovered population of grizzly bears.

Figure 3. Unduplicated females with cubs-of-the-year in the Greater Yellowstone Area (Haroldson 2005).



Alternative 2-Modified is tied closely to interagency agreements for habitat direction and cooperative and adaptive management reached in the Conservation Strategy. In response to public comment, Alternative 2-Modified also includes guidance to continue key ongoing Forest Service actions that have been instrumental in minimizing grizzly bear/human conflicts and promoting grizzly bear recovery. We have also formalized our commitment to maintaining the productivity, to the extent feasible, of the four key grizzly bear foods and monitoring other key habitat components.

The following are key elements of grizzly bear habitat and are addressed in terms of why Alternative 2-Modified is the selected alternative.

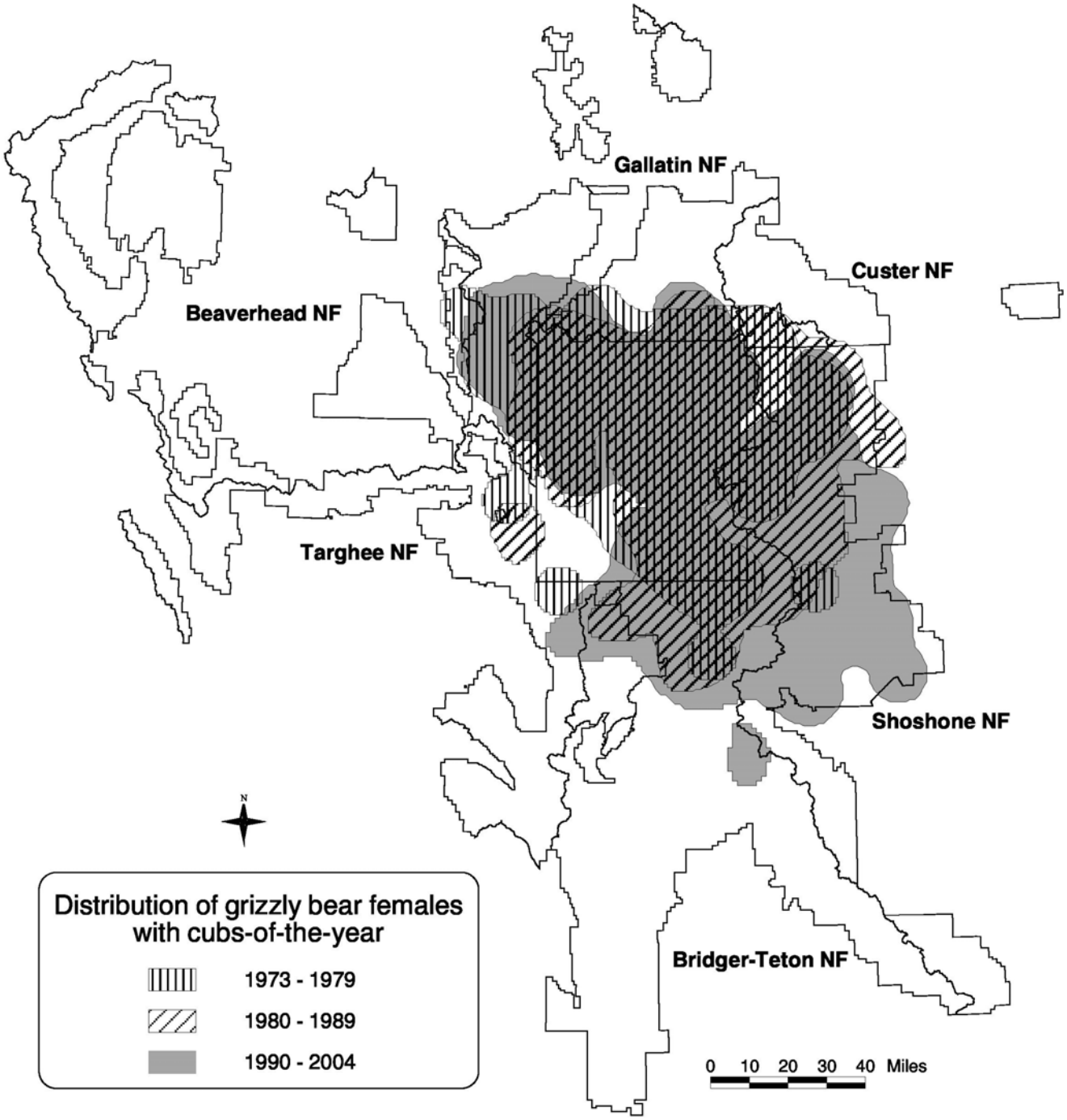
- Area necessary to sustain a recovered grizzly bear population
- Secure habitat
- Food sources
- Management of human activities
- Minimize grizzly bear/human conflicts

Area necessary to sustain a recovered grizzly bear population

Many respondents to the Draft Environmental Impact Statement suggested the area necessary to sustain the grizzly bear population should be expanded beyond the Primary Conservation Area. Some believed due to the uncertainty regarding the loss of important grizzly bear foods, especially whitebark pine, an area larger than the Primary Conservation Area should be managed for grizzly bears. Other respondents suggested the ability of bears to move between important habitats in the Greater Yellowstone Area, particularly outside the Primary Conservation Area, should be addressed. Others believed the Primary

Conservation Area is adequate and should not be expanded, while others believed the restrictions proposed under Alternative 4 outside the Primary Conservation Area were unrealistic.

Figure 4. Distribution of female grizzly bears with cubs-of-the-year for three different time periods in the Greater Yellowstone Area[5].



[5] Distribution map constructed from the initial observations of females with cubs-of-the-year using a 95 percent fixed kernel estimator (Schwartz et al. 2002 and Schwartz et al. 2005d).

The Recovery Plan identifies the Primary Conservation Area or recovery zone as the area where grizzly bears and grizzly bear habitat would be managed to achieve recovery while recognizing that grizzly bears would occur outside the recovery zone. The grizzly bear population achieved recovery under that zone designation. The Conservation Strategy identifies the Primary Conservation Area as the area adequate to sustain a recovered grizzly bear population and allows grizzly bear occupancy in biologically suitable and socially acceptable habitats, as identified by the states, outside the Primary Conservation Area.

There is little doubt the Primary Conservation Area is key to sustaining a recovered grizzly bear population. We have been and remain committed to maintaining the integrity of the Primary Conservation Area for grizzly bears. All alternatives in the Final Environmental Impact Statement provide various levels of protection to habitats inside the Primary Conservation Area. The question is how much habitat beyond the Primary Conservation Area should be managed to sustain the recovered grizzly bear population at a minimum of 400 bears as identified in the Conservation Strategy. It has been estimated that 10 to 14 percent of the 500 to 600 grizzly bears in the Greater Yellowstone Area from 1990 through 2004 lived outside the Primary Conservation Area. Approximately 21 percent of the area occupied by grizzly bears during that time was outside the Primary Conservation Area on National Forest System lands. Bears continue to expand in both range and numbers.

Alternatives 1, 2, and 3 do not specifically address the management of habitats for grizzly bears outside the Primary Conservation Area. Alternative 4 imposes restrictions on land uses outside the Primary Conservation Area where there is no way to predict when or if bears would occupy those areas. Alternative 2-Modified was developed between the Draft and Final Environmental Impact Statements in response to public comments and is consistent with the state grizzly bear management plans in providing guidance for accommodating the grizzly bear in biologically suitable and socially acceptable habitats outside the Primary Conservation Area. We believe Alternative 2-Modified will provide habitat protection in an area large enough to sustain the recovered grizzly bear population, while minimizing impacts to other forest activities. See further discussion in part 3 and the following discussions on secure habitat management inside and outside the Primary Conservation Area.

Secure habitat

Secure habitat is defined as areas greater than or equal to 10 acres in size[6] and more than 500 meters from an open or gated motorized access route or recurring helicopter flight line. This is the same definition used in the Conservation Strategy. Secure habitat is divided into long- and short-term secure habitat based on the management area categories in existing forest plans. Long-term secure habitat is within management areas where new motorized access routes will generally not be constructed. Short-term secure habitat is within management area categories that allow for forest management activities that could change secure habitat[7].

Many of the comments on the Draft Environmental Impact Statement were related to the amount of secure habitat that should be maintained for grizzly bears both inside and outside the Primary Conservation Area. Concerns were also expressed regarding the provision in Alternatives 2 and 2-Modified that allows for a temporary 1 percent reduction in secure habitat inside the Primary Conservation Area. Some suggested the 1 percent rule should be eliminated and no change allowed and others believed the percentage should be increased to allow for more management activities. Still others questioned the 1998 baseline and believed site-specific secure habitat levels should be set to meet identified population goals rather than a no net loss of secure habitat.

[6] Secure habitat for analysis used in this decision did not include areas open to cross country off-highway vehicle (OHV) travel.

[7] The long-term secure habitat subject to the 1 percent rule under Alternatives 2 and 2-Modified inside the Primary Conservation Area is defined as short-term secure habitat under Alternative 1. Under Alternative 1, short-term secure habitat inside the Primary Conservation Area could be lost due to project activities as there is no requirement to restore the secure habitat after project completion. Under Alternatives 2 and 2-Modified, any secure habitat affected by the 1 percent rule will be restored within one year after project completion and is considered long-term secure habitat.

We recognize the importance of secure habitat to long-term maintenance of the recovered grizzly bear population. This commitment to ensuring secure habitat for grizzly bears has resulted in a net reduction of over 600 miles of road inside the Primary Conservation Area on National Forest System lands from 1986 through 2002. Almost 10 percent of the existing secure habitat inside the Primary Conservation Area was created through these road closures. Maintaining habitat security requires minimizing mortality risk and displacement from human activities in a sufficient amount of habitat to allow the grizzly bear population to benefit from this secure habitat and respond with increasing numbers and distribution. Both of these bear population responses are currently ongoing in the Yellowstone population.

Secure habitat inside the Primary Conservation Area. There are 2.83 million acres of long-term secure habitat on National Forest System lands within the Primary Conservation Area, which is 83 percent of the National Forest System lands within the Primary Conservation Area (Figure 5). Under Alternative 2-Modified, 87 percent of the secure habitat on National Forest System lands inside the Primary Conservation Area will remain unchanged. Thirteen percent of the secure habitat could be affected temporarily under the 1 percent rule. Even if all subunits (the area of application for the secure habitat standard) had simultaneous projects on National Forest System lands inside the Primary Conservation Area, which is unlikely, only 29,500 acres of secure habitat could be affected at any one time. This means at least 82 percent of the habitat on National Forest System lands inside the Primary Conservation Area will always be secure. Under Alternative 2-Modified, any secure habitat temporarily affected by the 1 percent rule will be restored to secure habitat after project completion.

This level of habitat security, along with other habitat conditions inside the Primary Conservation Area in 1998, provided the base environment that led to the growth of the bear population and the achievement of all demographic recovery targets by 1998. The bear population continues to grow in range and numbers under these secure habitat conditions. The allowance of a 1 percent temporary reduction in secure habitat maintains options for resource management activities at approximately the same level as existed in 1998 as the bear population reached recovery. Therefore, we believe the 1998 baseline for secure habitat, used as the basis for the secure habitat standard in Alternative 2-Modified inside the Primary Conservation Area, is more than adequate to maintain the recovered grizzly bear population.

Figure 5. Total and secure habitat acres for areas inside the Primary Conservation Area under Alternative 2-Modified.

Area	Total acres	Long-term secure habitat acres	Acres of long-term secure habitat that will remain unchanged	Acres of long-term secure habitat subject to 1% rule
Primary Conservation Area	3,413,000	2,827,000	2,458,000	369,000

Alternatives 3 and 4 would result in 88 percent secure habitat on National Forest System lands inside the Primary Conservation Area (5 percent increase in secure habitat from existing conditions) by requiring each subunit to have a minimum of 70 percent secure habitat and by closing all existing motorized routes in inventoried roadless areas. No temporary reductions in secure habitat would be allowed. Forest management activities would not be allowed to occur at levels that existed during the recovery of the grizzly bear and some existing motorized recreation opportunities would be eliminated. We believe these strict limitations on other uses are unnecessary at this time. Bear populations continue to increase and expand without these restrictions.

Monitoring of secure habitat levels inside the Primary Conservation Area will continue under Alternative 2-Modified and the adequacy of secure habitat levels inside the Primary Conservation Area will be evaluated with other habitat and population parameters on an annual basis.

Secure habitat outside the Primary Conservation Area. The area outside the Primary Conservation Area as described in Alternative 4 is our best estimate of the biologically suitable habitat for grizzly bears on

National Forest System lands. This area was developed in response to concerns that more secure habitat should be maintained for grizzly bears outside the Primary Conservation Area and was based on the best available scientific information on suitable habitat and linkage areas outside the Primary Conservation Area. In Wyoming, this area is similar to that identified by the Wyoming Game and Fish Department as the area where grizzly bears outside the Primary Conservation Area would be managed to allow for population growth. This area includes lands identified for grizzly bear management in the Idaho and Montana state grizzly bear management plans on National Forest System lands, although these plans have not yet identified specific areas that are socially acceptable. The biologically suitable area includes 96 percent of the area occupied by grizzly bears on National Forest System lands outside the Primary Conservation Area from 1990 through 2004.

Alternative 4 results in an increase from 72 percent secure (71 percent long term) to 85 percent secure (100 percent long term) in the Alternative 4 area outside the Primary Conservation Area by requiring each analysis unit (the area of application for the secure habitat standard in Alternative 4 outside the Primary Conservation Area) to have a minimum of 70 percent secure habitat and by closing all motorized access routes (roads and trails) in inventoried roadless areas. No temporary reductions in secure habitat would be allowed. Forest management activities would be significantly reduced and many existing motorized recreation opportunities would be eliminated.

Many believe that existing forest plans—following the Interagency Grizzly Bear Guidelines— provide habitat protections outside the Primary Conservation Area for the bear as a listed species. These Guidelines, applicable under Alternative 1, do not provide habitat direction for the bear outside the Primary Conservation Area. Section 7 consultations with the U.S. Fish and Wildlife Service for activities outside the Primary Conservation Area have generally been focused on minimizing conflicts and mortality rather than prescribing habitat direction.

Management of secure habitat outside the Primary Conservation Area under Alternatives 1, 2, and 3 would be guided by existing individual forest plan direction. The same direction will apply under Alternative 2-Modified with the addition of requirements to monitor changes in secure habitat in areas determined by the states to be biologically suitable and socially acceptable for grizzly bear occupancy. Results will be reported and evaluated with other required monitoring according to the process outlined in the Conservation Strategy (see part 3.3). The following discussion focuses on how secure habitat outside the Primary Conservation Area will be managed under existing forest plan direction and why we selected Alternative 2-Modified.

The areas estimated to be biologically suitable for grizzly bears outside the Primary Conservation Area on National Forest System lands total six million acres. Nearly three-fourths of the six million acres are secure habitat. About one-half of the six million acres is long-term secure habitat because it is in a management designation that generally does not allow road building, such as wilderness or backcountry management (long-term secure) (Figure 5). The remaining secure habitat, about one-fifth of the six million acres, is short-term secure habitat. Some of the short-term secure habitat (less than one-third of the total secure habitat) could be changed due to management activities. Most of the short-term secure habitat is managed under current forest plan direction that limits the amount of new road construction, e.g., road density standards on the Bridger-Teton and Targhee National Forests and no net gain in roads on the Shoshone National Forest. Additionally, the draft revised forest plan for the Beaverhead-Deerlodge National Forest proposes road density standards for all Forest landscapes, and the draft travel management plan for the Gallatin National Forest includes a Forest-wide standard for no increase in public motorized access routes. These standards will allow only small changes in existing motorized access route density and associated secure habitat. Further, the trend over the last 17 years has been a reduction in road miles. Over 1,400 miles of road have been decommissioned in the Greater Yellowstone Area national forests, with less than 400 miles of road being constructed—a net reduction of over 1,000 miles of road. Approximately 37 percent of the short-term secure habitat in the biologically suitable area is open to leasing for oil and gas where surface occupancy is allowed. Much of this area has a very low to moderate potential for occurrence and there are only eight active leases. Refer to part 3.3 for more discussion on oil and gas leasing.

In summary, the biologically suitable area outside the Primary Conservation Area contains three million acres more secure habitat (4.3 versus 1.3 million acres) in excess of that used by bears outside the Primary Conservation Area on National Forest System lands from 1990 through 2004 (Figure 6). This area contains two million acres more long-term secure habitat (3.1 versus 0.7 million acres) in excess of that used by bears outside the Primary Conservation Area on National Forest System lands. While we recognize there is not a one-to-one relationship between the amount of secure habitat and bear population numbers, we believe the maintenance of this level of secure habitat outside the Primary Conservation Area will provide additional assurances the population will be maintained above 400 grizzly bears as required by the Conservation Strategy.

Figure 6. Total and secure habitat acres for areas outside the Primary Conservation Area on the six Greater Yellowstone Area national forests.

Area	Total acres	Secure habitat acres	Acres of long-term secure habitat[1]	Acres of short-term secure habitat[1]
Area estimated to be biologically suitable habitat for grizzly bears outside the Primary Conservation Area	5,999,000	4,331,000	3,089,000	1,242,000
Occupied grizzly bear habitat outside the Primary Conservation Area from 1990-2004	1,954,000	1,277,000	699,000	578,000

[1] Designation as long- or short-term secure habitat based on current forest plan direction.

Alternative 4 increases the amount of secure habitat outside the Primary Conservation Area with restrictions and motorized route closures (1,850 miles overall). We believe restrictions and closures over such a large area, without existing bear occupation or state defined biologically suitable or socially acceptable areas, are premature and would meet with resistance from local communities and recreation users and are unnecessary to maintain adequate secure habitat outside the Primary Conservation Area.

Alternatives 1, 2, and 3 would provide the same assurances for maintenance of secure habitat outside the Primary Conservation Area as Alternative 2-Modified because management area direction outside the Primary Conservation Area in existing forest plans will not change. Alternatives 1, 2, and 3 provide no guidance for accommodating grizzly bears outside the Primary Conservation Area in biologically suitable and socially acceptable areas nor do they require monitoring secure habitat outside the Primary Conservation Area.

We believe Alternative 2-Modified does the best job of maintaining sufficient secure habitat both inside and outside the Primary Conservation Area to support the recovered grizzly bear population at desired levels, while allowing for management activities and other uses. Secure habitat outside the Primary Conservation Area will be monitored and any reduction in secure habitat evaluated as part of the Biology and Monitoring Review process identified in the Conservation Strategy. The selected alternative provides the most flexibility in working with state wildlife management agencies and local communities to define areas that will be socially acceptable and biologically suitable for bear occupancy. We believe public acceptance of grizzly bears is a key component in the ultimate success of sustaining a recovered grizzly bear population.

One concern we heard from respondents was an interest in maintaining or improving connectivity between important habitats in the Greater Yellowstone Area. We believe the maintenance of over three million acres of long-term secure habitat, supplemented by over one million acres of short-term secure habitat outside the Primary Conservation Area, will provide the security necessary for bears to occupy

many new areas within the Greater Yellowstone Area, improving chances for movement between important habitats.

Food sources

Respondents expressed numerous concerns regarding the persistence of the four major foods for grizzly bears— ungulates, cutthroat trout, army cutworm moths, and whitebark pine seeds—in the Greater Yellowstone Area. Of greatest concern was the future health of whitebark pine stands. Most respondents believed potential declines in these foods, from disease, climate change, and other factors, would significantly impact grizzly bear populations and that larger areas with more protection should be managed for the grizzly bear to offset any declines in availability of these foods. Others suggested threats to these food sources should be studied further or the Forest Service should manage habitats to protect or enhance these important foods.

We have long recognized the importance of these foods to bears. The annual availability of these four key foods currently fluctuates widely primarily due to weather conditions and is generally independent of forest management or recreational activities. Grizzly bears have shown great adaptability to annual fluctuations in these key foods. Reproductive performance has remained constant over the years as the population has continued to grow between 4 to 7 percent annually, even with this food fluctuation (USDI FWS 2005a).

Coordinated efforts have been ongoing for over a decade to gather more information on the status of whitebark pine and to develop management strategies to ensure whitebark pine's future in the Greater Yellowstone Area. Transects for long-term monitoring have been established and a draft map displaying the distribution of whitebark pine has been completed. We have emphasized the importance of moth aggregation sites by discouraging new trails or extensive human uses in these areas. Winter ranges for ungulates have always received special management emphasis, partly for their importance to spring carcass-feeding bears. Since 1979, the Interagency Grizzly Bear Guidelines for forest management activities that were adopted by all the Greater Yellowstone Area national forests have included direction for protecting, maintaining, or enhancing important foraging areas for grizzly bears.

In response to potential declines in these important foods due to climate change or disease, grizzly bear use of moth aggregation sites, cutthroat trout spawning streams, whitebark pine cone production, and availability of winter-killed ungulate carcasses will continue to be monitored annually under the direction in the Conservation Strategy. The selected alternative provides additional guidance not included in the Conservation Strategy or Alternative 2 for maintaining the productivity of the four key grizzly bear foods inside and outside the Primary Conservation Area, with emphasis on maintaining and restoring whitebark pine. We believe this emphasis may lead to improved conditions for whitebark pine if additional funds are available for research or restoration activities. Vegetation management activities could be used to increase whitebark pine resistance to disease, regenerate stands where whitebark pine is declining, and improve habitats for ungulates. The productivity, occurrence, and health of whitebark pine will be monitored and annually submitted for inclusion in the Interagency Grizzly Bear Study Team Annual Report, which will serve as the basis for determining the need for adaptive management if significant declines in these important foods occur and/or negative grizzly bear population responses are documented.

We believe the selected alternative and the Conservation Strategy together provide the mechanisms to monitor and document any declines in the four key grizzly bear foods and respond as necessary with management changes. Alternative 2-Modified provides secure habitat for grizzly bears inside and outside the Primary Conservation Area in sufficient quantity and protection to allow the grizzly bear to increase in numbers and range, even if some of these foods decline.

Alternative 4 does not provide additional protection to food sources from the potential impacts of climate change above and beyond those adaptive management practices specified for Alternative 2-Modified. The strict limits on other uses of National Forest System lands outside the Primary Conservation Area are, we believe, counterproductive in maintaining habitats for grizzly bears. Rather, the adaptive

management approach of the selected alternative will provide for interagency and public cooperation in the maintenance and monitoring of habitat for grizzly bears outside the Primary Conservation Area.

Where needed, critical food sources including whitebark pine seed production, army cutworm moth aggregation sites, major fish spawning areas, elk parturition areas, and big game winter ranges will be maintained. Seasonal area closures will be used as necessary to provide adequate security to ensure areas are available to bears.

Management of human activities

Some respondents believed the numbers of developed sites both inside and outside the Primary Conservation Area should be reduced and those with recurring conflicts with grizzly bears should be eliminated. Others were concerned that limits on developed sites inside the Primary Conservation Area would impact future recreation uses (see part 3.2). Most comments on the livestock grazing standard (Standard 3) suggest more emphasis should be given to the grizzly bear in livestock conflict cases, both inside and outside the Primary Conservation Area. Some respondents were particularly concerned that cattle conflicts inside the Primary Conservation Area would not be solved in favor of the bear, while others felt the lack of direction for resolving conflicts with sheep and grizzly bears outside the Primary Conservation Area was inappropriate.

A primary factor in providing for the conservation of grizzly bears is the management of human activities on the landscape. Most of the conflicts with grizzly bears on National Forest System lands in the Greater Yellowstone Area that can be attributed to Forest Service management activities are associated with developed sites and livestock allotments. In response, in conjunction with willing permittees, we have closed many domestic sheep allotments inside and outside the Primary Conservation Area to benefit the grizzly bear. Portions of cattle allotments have been rested to reduce conflicts and one cattle allotment has been closed to grazing. We have included special provisions, including food storage requirements, in livestock grazing permits and special use permits for developed sites to minimize grizzly bear/human conflicts. The number and capacity of developed sites on National Forest System lands has been reduced or remained stable in most cases during the last decade. Several developed sites have been closed; some campgrounds have been modified to allow hard-sided camping only or designated as picnic areas.

Developed sites. Developed sites in grizzly bear habitat increase the potential for conflict with humans primarily due to the potential availability of human foods. Developments also reduce the effectiveness of the natural habitat near these sites. The larger the developed site and the more people using the site, the greater the potential for conflicts and reduction in the effectiveness of the adjacent habitat for bears. Food storage regulations and information and education efforts mitigate much of the potential for conflict.

Alternative 2-Modified defines and limits site development within the Primary Conservation Area and contributes to sustaining the recovered grizzly bear population. Rather than imposing the strict requirements to close developed sites with recurring conflicts in the Primary Conservation Area (Alternatives 3 and 4), we believe the direction included within Alternative 2-Modified inside the Primary Conservation Area to minimize grizzly bear/human conflicts with various management tools provides a more effective and flexible approach to solve problems on a case-by-case basis for the benefit of the bear. Food storage orders, information and education, and clauses in special use permits have been effective in solving many conflict issues at developed sites. Alternative 2-Modified includes direction for continuing these efforts inside the Primary Conservation Area. Bear populations have recovered with the existing level of developed sites inside the Primary Conservation Area and the number of bears continues to increase.

Limiting site development outside the Primary Conservation Area, as proposed under Alternative 4, is unnecessary at this time. The guidance under the selected alternative to accommodate grizzly bears in areas outside the Primary Conservation Area in cooperation with the states allows us to make adjustments in site development as needed and provides the mechanisms to accommodate site development outside the Primary Conservation Area where these developments are precluded inside the

Primary Conservation Area. Food storage and other management tools will be used at these developed sites to minimize conflicts. Although it was assumed food storage orders would remain, Alternatives 2 and 3 are silent on direction for minimizing conflicts or accommodating grizzly bears outside the Primary Conservation Area. Alternative 4 would impose limits on site development where there is no way to predict when or if bears would occupy those areas. Grizzly bear populations are expanding in range and numbers outside the Primary Conservation Area with the existing level of developed sites. Food storage orders and information and education efforts are ongoing in areas occupied by bears outside the Primary Conservation Area. Alternative 2-Modified includes guidance to ensure the continuation of these efforts to accommodate grizzly bears in areas that are biologically suitable and socially acceptable. Many of the conflicts between grizzly bears and humans occur at dispersed camping sites. Alternative 2-Modified provides the flexibility to deal with these problem areas by consolidating dispersed uses into a new or existing developed site where compliance with food storage regulations can be more easily monitored and controlled. Under Alternative 4, no increase in developed sites would be allowed, regardless of the potential benefit to bears.

Livestock grazing. Most, if not all, grizzly bears that come in contact with domestic sheep prey on sheep and conflicts are inevitable. The majority of grizzly bears that come in contact with cattle do not make kills. Conflicts between livestock and grizzly bears have resulted in the relocation, removal, or direct mortality of grizzly bears. Many of the conflicts with grizzly bears and sheep have been resolved inside the Primary Conservation Area due to the closure of many of the affected allotments. Selective removal of grizzly bears is a viable management option, particularly when adult males that are repeat offenders are involved and translocation, aversion tactics, or carcass removal efforts are ineffective.

All action alternatives prohibit the creation of new allotments and provide various levels of guidance for resolving conflicts with grizzly bears and livestock inside the Primary Conservation Area. Alternatives 3 and 4 require the closure of the four remaining sheep allotments within three years and the closure of portions of cattle allotments with recurring conflicts. Alternatives 2 and 2-Modified do not allow increases in sheep animal months and would phase out the four sheep allotments with willing permittees. In response to public comment, Alternative 2-Modified includes guidance for retiring cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices as opportunities arise with willing permittees. Permittees with allotments that experience recurring conflicts will be given the opportunity to place their livestock in a vacant allotment outside the Primary Conservation Area should one be available. The nuisance bear standards in the selected alternative will allow the removal of bears that kill livestock but removal of female grizzly bears will be minimized. Adult males are responsible for the majority of cattle depredations. No grizzly bear involved in livestock depredations will be removed unless it has been relocated at least once and continues to prey on domestic livestock. We believe Alternative 2-Modified provides the mechanisms necessary to minimize conflicts with cattle inside the Primary Conservation Area without the mandatory retirement of these allotments as prescribed under Alternatives 3 and 4. Only three of the existing 69 cattle allotments inside the Primary Conservation Area have been documented with recurring conflicts between 1992 and 2004.

Alternatives 2 and 3 do not provide guidance for resolving livestock conflicts outside the Primary Conservation Area. Alternative 2-Modified includes guidance for retiring both sheep and cattle allotments with recurring conflicts outside the Primary Conservation Area that cannot be resolved through modification of grazing practices as opportunities arise with willing permittees. Alternative 4 requires the closure of all 73 sheep allotments outside the Primary Conservation Area within three years and the closure of portions of cattle allotment with recurring conflicts. Only two cattle allotments outside the Primary Conservation Area have been documented with recurring conflicts from 1992 through 2004. For areas outside the Primary Conservation Area, the nuisance guidelines in state grizzly bear management plans would apply under all action alternatives, with direction on how to manage bears that prey on livestock.

We believe Alternative 2-Modified is the best approach for managing conflicts with grizzly bears and livestock outside the Primary Conservation Area. Many of the sheep allotments that would be closed under Alternative 4 are not occupied by grizzly bears. These blanket closures would likely increase

social intolerance for grizzly bears. Rather, the mechanisms to solve livestock depredation issues on a case-by-case basis would minimize impacts on local communities and the livestock industry.

Minimize grizzly bear/human conflicts

Many respondents had concerns regarding the need to minimize grizzly bear/human conflicts from both the impacts to grizzly bears and the risks to human safety. Grizzly bear mortality is almost solely attributable to grizzly bear/human conflicts with a common outcome of bear mortality by interagency bear managers or by other humans. Human injuries and deaths are often associated with grizzly bears that have a prior history of conflicts with humans. Human-food conditioned and human-habituated bears are usually removed from the population due to the threat they pose to humans. Efforts by the six Greater Yellowstone Area national forests, other state and federal agencies, and numerous non-governmental agencies to minimize grizzly bear/human conflicts and subsequent mortality have been key to grizzly bear recovery.

To reduce grizzly bear conflicts and deaths on National Forest System lands, we have established food storage regulations and special grizzly bear requirements in contracts and permits, provided bear resistant containers for garbage/food storage and information and education materials and programs, and issued access restrictions and regulations. Studies have demonstrated these efforts have been successful in reducing grizzly bear mortalities. Of the 270 documented grizzly bear mortalities in the Greater Yellowstone Area since 1975, only 27 are directly or indirectly attributable to Forest Service management activities or actions.

Alternative 2-Modified provides direction to continue with efforts to minimize conflicts both inside and outside the Primary Conservation Area using food storage regulations, information and education, and other management tools, including efforts to assist the public in the development of bear resistant products. Minimizing conflicts benefits both bears and people. While it was assumed these efforts would continue inside the Primary Conservation Area under Alternatives 2 and 3, no specific direction was provided. Alternative 4 requires forest wide food storage regulations, while Alternatives 3 and 4 require elimination of sites with recurring conflicts and area closures; neither specifically identifies the need to minimize conflicts through information and education efforts or use less restrictive management tools. Alternative 2-Modified provides adequate direction to ensure the continued use of proven methods to minimize conflicts without eliminating human uses. Strict requirements to eliminate human uses before trying other, less drastic approaches could work against grizzly bear expansion. Public support for grizzly bear occupancy and expansion is important for long-term persistence of the grizzly bear in the Greater Yellowstone Area. The direction in the selected alternative to work cooperatively with local governments and other agencies to minimize conflicts outside the Primary Conservation Area is especially critical to local public support.

3.2 Principal reason 2 - local communities and social and economic values are acknowledged and public safety is emphasized

Grizzly bears and bear management affect people's lifestyles, livelihoods, and values. This amendment affects 20 counties, more than 40 local communities, and more than 370,000 human residents in the Greater Yellowstone Area. Grizzly bears and bear management also affect the estimated eight million recreation visits that occur annually on the six national forests in the Greater Yellowstone Area. Approximately 60 percent of recreation users are local, but regional, national, and international visitors are attracted to the area as well. This amendment affects the business operations that are closely tied to the Greater Yellowstone Area, including outfitting and guiding services, resorts and recreation businesses, and ranching operations that have traditionally used public lands to graze livestock during the summer months.

It is a credit to all citizens, residents, businesses, and recreation users that the demographic recovery targets have been met—the grizzly bear population has recovered.

Recreation activities and grizzly bear/human interactions have been monitored and evaluated over the last 25 years by the various land management agencies, research scientists, the Interagency Grizzly Bear Committee, and non-governmental organizations. Particular efforts deemed effective in managing grizzly bear/human interactions are:

- Information and education about recreating and living in bear country
- Ensuring unnatural food sources are secure from bear use
- Limiting human development and access within bear areas
- Responding to grizzly bear/human conflicts

The public highly values their opportunities to recreate and enjoy wildlife viewing in the Greater Yellowstone Area. The current undeveloped nature, wildness, and presence of grizzly bears are part of the allure that attracts recreation visitors and are valued by many of the residents of the Greater Yellowstone Area. Alternative 2-Modified maintains the undeveloped and wild character of the Greater Yellowstone Area within the Primary Conservation Area. Additionally, Alternative 2-Modified addresses the needs of the grizzly bear outside the Primary Conservation Area and the recreation pursuits and values of the public. Alternative 4 offers the most control over human uses inside and outside the Primary Conservation Area, which supports some of the environmental interests. Alternative 2-Modified best moves the partnership between the public, local communities, and state and federal governments in a common commitment toward support of the bear and without major impacts to recreation and livestock grazing on lands currently unoccupied by grizzly bears.

Public safety

Public safety continues to be a key consideration in grizzly bear management. Alternative 2-Modified addresses this concern by managing nuisance bears and minimizing grizzly bear/human conflicts using food storage, information and education, and other management tools within the Primary Conservation Area. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, Alternative 2-Modified emphasizes proper sanitation techniques, including food storage orders and information and education, while working with local governments and other agencies.

Alternative 2-Modified puts more attention on public safety than do Alternatives 1, 2, and 3 by including areas outside the Primary Conservation Area where bears may exist. Alternatives 3 and 4 include a standard to eliminate developed sites or dispersed camping, including outfitter camps, with recurring grizzly bear/human conflicts and limit use of backcountry trails in high bear-use areas. These restrictions are not necessary to include in Alternative 2-Modified because other agencies are actively responding to reported grizzly bear/human conflicts and working to resolve recurrent problems. We have the flexibility of making adjustments on a site-specific basis and will continue to use the nuisance bear standard in resolving conflicts.

Recreation, social and economic effects on local communities, and commercial livestock grazing

Other social and economic considerations relate to issues identified through public comments during scoping and on the Draft Environmental Impact Statement. These include:

- Recreation opportunities—motorized use
- Recreation opportunities—developed sites
- Recreation opportunities—winter use activities
- Social and economic effects on local communities
- Commercial livestock grazing

Recreation opportunities—motorized use. Many people expressed concerns that grizzly bear habitat standards would result in reduced motorized recreation opportunities by closing more roads and trails to motorized use. Motorized use is closely associated with reduced levels of secure habitat for grizzly bears. Since secure habitat is more than 500 meters from an open or gated motorized access route, where security is needed, permanent closures of motorized routes are often the solution.

Alternative 2-Modified and all alternatives reflect a history of motorized route (roads and trails) restrictions and closures that achieved the secure habitat that exists both inside and outside the Primary Conservation Area. Over the years, this has resulted in a net reduction of more than 1,000 miles of motorized routes on the six Greater Yellowstone Area national forests. This reduction has impacted many people who have enjoyed more freedom in exploring public lands through motorized travel. Because 83 percent of the Primary Conservation Area is secure habitat, additional motorized route closures are not proposed by Alternative 2-Modified. Alternatives 3 and 4 proposed an additional 500 miles of motorized closures within the Primary Conservation Area; we believe these closures are unnecessary at this time and would unduly impact existing motorized use. We also recognize that as individual national forests amend forest plans with regard to travel management, recreational opportunities and wildlife habitat needs will be more comprehensively evaluated than with these amendments, which focus on grizzly bear habitat management across six national forests.

Alternative 4 proposed an additional 1,400 miles of motorized route closures outside the Primary Conservation Area. We believe these additional closures are unnecessary at this time. Under Alternative 2-Modified, there are approximately 4,331,000 acres of long- and short-term secure habitat on National Forest System lands outside the Primary Conservation Area in areas estimated to be biologically suitable for grizzly bears. We believe this is an adequate base and provides opportunities for grizzly bear movement and occupancy outside the Primary Conservation Area. Alternative 2-Modified does not propose motorized route closures. The selected alternative provides more flexibility in working with state wildlife management agencies and local communities to define areas that will be socially acceptable and biologically suitable for bear occupancy. Alternative 2-Modified goes beyond Alternatives 1, 2, and 3 to address the existing and likely occupancy by grizzly bears of lands outside the Primary Conservation Area with the goal of accommodating grizzly bear populations with other land use activities.

Recreation opportunities—developed sites. Generally, the public did not seem as concerned with the standard that maintains developed Forest Service recreation sites (campgrounds, trailheads, lodges, etc.) at 1998 levels as they were with the potential effects on motorized use. The exceptions were agency comments concerned with areas that are experiencing capacity limits and public concerns regarding the effects to special use permitted resorts, ski areas, and lodges if developed sites were limited to 1998 levels.

Alternative 2-Modified retains Standard 2 as identified in the proposed action and in the Conservation Strategy. Within the Primary Conservation Area, approximately 267 developed recreation sites—nearly one-third of developed recreation sites in the six Greater Yellowstone Area national forests—will not be increased in size to accommodate more people, unless increases are mitigated. Specifically, this could affect approximately 19 lodges, resorts, dude ranches, and hotels having special use permits on the six national forests.

Agency concerns about experiencing capacity limits are currently more of an issue in areas outside the Primary Conservation Area, specifically to accommodate winter use parking on the Gallatin and Targhee National Forests and to better manage dispersed use by concentrating use in some developed sites on the Custer National Forest.

Taking steps to define and limit recreation developments within the Primary Conservation Area is appropriate and contributes to sustaining the recovered grizzly bear population. Research shows grizzly bear use is lower and foraging behavior is disrupted in areas near human developments and activities. Alternative 2-Modified retains the relatively undeveloped character within the Primary Conservation Area and people will continue to be attracted to the area for its wildlife and scenic beauty.

Alternative 2-Modified is similar to Alternatives 1 and 2 where developed sites have been maintained at or below capacity since 1998. Alternative 2-Modified allows for slight adjustments in developed site capacity based on the Application Rules and this differs from the stricter standards of Alternatives 3 and 4. Some flexibility is important to respond to situations for the benefit of the bear.

In addition, we chose not to extend the limitations on developed sites outside the Primary Conservation Area, as Alternative 4 does, because we want to reserve the opportunity to evaluate the entire spectrum

of recreation use and potential conflicts with grizzly bears and make adjustments as needed when recurring conflicts are identified at local levels. Further, we want the ability to accommodate potentially displaced recreation uses (from inside the Primary Conservation Area) in areas outside the Primary Conservation Area.

Recreation opportunities—winter use activities. Many respondents to the Draft Environmental Impact Statement raised concerns that snow machine use would be eliminated from bear denning habitat under Alternatives 3 and 4. Snow machine use is one of the primary recreation activities on the Bridger-Teton, Gallatin, Shoshone, and Targhee National Forests. As a 2002 Biological Opinion on snow machine use noted, the effects of snow machining on grizzly bears show disturbance and conflicts with grizzly bears have always been very low. We believe it is more appropriate to encourage restrictions on snow machine use on a localized basis where conflicts with denning or bear emergence in the spring are identified.

Social and economic effects on local communities. Many respondents were concerned with the effects on income, employment, and lifestyle changes related to livestock operations, ranches, people associated with the timber industry, and recreation-related businesses. National Forest System lands within the Greater Yellowstone Area contribute to the social and economic bases of more than 40 local communities. Residents and communities need to ensure proper management of bear attractants as bear populations have expanded their range and movement through private lands. Some counties have passed resolutions banning the presence of grizzly bears and are concerned about the social and economic well being of their areas.

We are committed to sustaining a recovered grizzly bear population in the Greater Yellowstone Area. This commitment is shared and managed with other agencies and organizations. Alternative 2-Modified was developed to respond to public and agency concerns about the need to provide for grizzly bears as the population expands outside the Primary Conservation Area. Grizzly bear habitat needs and minimizing human/bear conflicts are addressed. The value many people place on grizzly bears is also acknowledged in the selected alternative. While some communities will not favor additional grizzly bear management guidance outside the Primary Conservation Area, the guidance is responsive to managing bear habitat where bears are already occupying these areas and will ensure coordination with the states' roles in managing bears.

We recognize the importance of public acceptance of grizzly bears as a key component in the ultimate success in perpetuating the bear's recovery, public safety, and ease to which agencies can effectively manage for the bear. A continued dialogue with the public, including local communities and environmental organizations, will be essential as grizzlies occupy lands outside the Primary Conservation Area. Alternative 2-Modified includes guidance outside the Primary Conservation Area based upon the states' definitions of socially acceptable and biologically suitable lands for the grizzly bear.

Alternative 2-Modified does the best job of managing habitat for bear populations while ensuring close coordination with the states and local communities with regard to socially acceptable areas for bears. Alternatives 1, 2, and 3 do not address the management of lands outside the Primary Conservation Area, and Alternative 4 imposes restrictions on land uses when there is no way to predict when or if bears would occupy those areas. Local communities, residents, and recreation users are likely to be intolerant of the restrictions in Alternative 4; we believe Alternative 4 diminishes the societal acceptance of bear occupation and our ultimate goal of accommodating bears.

Livestock grazing operations. Livestock grazing on public lands is a long tradition of western culture and the use of public lands has been a key component of viable ranching operations. As has been demonstrated within the Primary Conservation Area, grizzly bears and sheep grazing are relatively incompatible, whereas cattle grazing and grizzly bears can be compatible with active management by the livestock operator and immediate response by agency officials when conflicts between bears and livestock are identified.

Alternative 2-Modified maintains the management direction within the Primary Conservation Area as identified in the Conservation Strategy. Consistent with Alternatives 1 and 2, the selected alternative will

phase out, at most, four sheep allotments. Alternatives 3 and 4 require the immediate action of closing the operations and include three cattle allotments as well. The approach in the selected alternative will work for the bear and is appropriate with our permittee partnerships.

Alternative 2-Modified diverges from Alternatives 1 and 2 by establishing a guideline for livestock grazing outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy. This direction is needed to address recurring conflicts between livestock and bears. This guideline is less restrictive than Alternative 4's, which would close 73 sheep allotments and two cattle allotments outside the Primary Conservation Area. The best approach with livestock grazing and grizzly bears is reflected with the selected alternative. We intend to minimize the economic impact on grazing operations and address local situational conflicts between bears and livestock as they occur.

Vegetation, fuels, and access

Timber management. Since implementation of the Interagency Grizzly Bear Guidelines, vegetation management has been limited to those activities that did not adversely affect grizzly bears. For all six Greater Yellowstone Area national forests, nearly 10,000 acres have been treated each year through timber harvesting since 1986; although in the three-year period from 2000 through 2002, only 1,400 acres were treated annually. The 10,000 acres represent 0.1 percent of the area of National Forest System lands in the Greater Yellowstone Area and 1 percent of the suitable acres. A review of five-year vegetation treatment plans indicates this number may have increased from the past three years, but is expected to be within the 17-year average, with vegetation treatment expected to be around 5,000 to 10,000 acres per year in order to address insect, disease, and hazardous fuels concerns.

Some respondents felt that Alternative 2 allowed too much flexibility and at least one part of the Application Rule, the 1 percent temporary reduction in secure habitat, should be dropped to allow no reduction in secure habitat. Others felt the standard for secure habitat was too restrictive and more than one project should be allowed at a time in a Bear Management Unit subunit.

Alternative 2-Modified provides about the same amount of flexibility in treating vegetation as current management (Alternative 1). Because the secure habitat standard allows a 1 percent temporary reduction in secure habitat, timber harvesting activities that took place under the Guidelines could take place in this alternative. A 1 percent change in secure habitat means, on average, about 2,000 acres of secure habitat could be temporarily changed in a Bear Management Unit subunit since subunits average around 200,000 acres. Most timber sale and mechanical treatment activities are temporary and would fit within this standard. Additionally, road decommissioning will occur within one year after project completion. Harvesting activities, other than road construction or the opening of a permanently restricted road, do not affect secure habitat. Up to about five miles of temporary road could be constructed to access areas for vegetation management under this Application Rule.

Alternatives 3 and 4 evaluated dropping the Application Rule that allows a 1 percent temporary reduction in secure habitat. It is necessary to have the 1 percent Application Rule in order to allow managers to have some flexibility in managing vegetation. Without the Application Rule, the effects of reduced timber harvest in Alternatives 3 and 4 could be severe in terms of lost jobs and income in local communities. Finally, the recovered grizzly bear population could be sustained with a 1 percent temporary reduction in secure habitat because it is temporary. Secure habitat will be restored within one year of project completion; the grizzly bear population recovered with this level of activity.

Our analysis indicates almost all harvesting activities that have taken place in the last 15 years could still take place within the secure habitat standard. During the last decade, the rate of road decommissioning has been greater than the rate of road construction both inside and outside the Primary Conservation Area, indicating the past level of harvesting activities would be consistent with the 1 percent temporary change in secure habitat.

The current level of vegetation management can proceed with the selected alternative without negatively impacting the recovered grizzly bear population. Alternative 2-Modified provides some additional flexibility in treating vegetation due to fewer timing restrictions on timber harvest. These treatments are

generally designed to protect structures, help control wildfire, prevent extensive loss of bear food sources, as well as provide timber and associated income and jobs to local communities.

Fuels and vegetation management. Nearly all of the vegetation in the Greater Yellowstone Area has burned at one time or another. All the major plant communities have adapted to fire, although some plant communities ignite and carry fire more readily than others do. Conditions under which any given vegetation community will burn vary, depending on a wide variety of parameters including temperature, humidity, and vegetation type.

Across the national forests in the Greater Yellowstone Area, the overall composition and structure of the different forest types would not be expected to change much in any alternative due to the effects of motorized access restrictions on potential vegetation treatments. Vegetation treatments would affect only about 0.1 percent of the National Forest System lands in Alternatives 1, 2, and 2-Modified. Within the suitable timber base and based on historical harvest rates in the past 17 years, about 6 percent of the area would be treated in one decade (about 98,000 acres out of the 1,500,000 acres in the suitable timber base). This can help improve conditions for some of the key forest types, such as aspen and lodgepole pine.

The selected alternative is consistent with current wildland fire management, prescribed fire, and fuels management activities. The objectives, standards, and guidelines in the selected alternative will have little effect on fire starts or acreages burned. Roads currently available will remain available for use. Dozer lines created as part of wildland fire activities will be rehabilitated as part of normal fireline operations and will not reduce secure habitat. Allowing a 1 percent temporary reduction in secure habitat can allow some treatments of vegetation to improve composition and structure of key vegetation types, although we recognize these treatments will only be a small part of the landscape. Fire, both wildland fire and prescribed fire, will continue to be the single biggest process that changes vegetation in the Greater Yellowstone Area.

Treatment of areas in the wildland urban interface is of particular concern because of communities at risk from destruction by wildland fire, such as Cooke City and West Yellowstone, Montana. Strategic placement of fuels treatments can affect the intensity and pattern of wildland fires. The same number of acres can be mechanically treated for fuels under the selected alternative as under current management. The Application Rule allows up to nearly five miles of road to be temporarily built for fuels treatment in a subunit at one time. This is more than adequate to treat fuels within 1½ miles of structures or communities.

Access management. From 1986 through 2002, over 1,400 miles of road were decommissioned in the six Greater Yellowstone Area national forests, with less than 400 miles of road being constructed—a net reduction of over 600 miles of road inside the Primary Conservation Area and 400 miles outside the Primary Conservation Area. These tended to be roads in excess of what was needed for management or recreational activities, were difficult or expensive to maintain, or both.

The trend for road decommissioning inside the Primary Conservation Area has slowed, with only 13 miles decommissioned from 2000 to 2002, as opportunities are limited for more decommissioning. Outside the Primary Conservation Area, opportunities still exist for road decommissioning.

Some respondents were concerned more roads could be closed with the selected alternative—restricting access—while other respondents felt more road closures were necessary to improve habitat for the grizzly bear.

The selected alternative will not change access, current use, traffic patterns, and road standards from current management. The secure habitat standard requires secure habitat be maintained at 1998 levels, which allows access and use to continue at those levels. Proposals to permanently increase the transportation system in the Primary Conservation Area will not occur unless mitigation is met, as described in the Application Rules. We believe the current level of access is reasonable for the enjoyment of the recreating public. Not increasing the access will “keep it the way it is”; that is, the six Greater Yellowstone Area national forests will maintain their primitive settings for the nation to enjoy, with the grizzly bear an integral part of the landscape.

Minerals management

There are no active oil and gas leases inside the Primary Conservation Area. Under current management, oil and gas development could occur but surface occupancy is allowed on only 3 percent of the National Forest System lands inside the Primary Conservation Area. Leasing decisions have yet to be made for the Gallatin National Forest and a small portion the Bridger-Teton National Forest inside the Primary Conservation Area.

Many respondents were concerned oil and gas leasing would increase if Alternative 2 were implemented and the grizzly bear delisted. The respondents felt this could lead to increased oil and gas development in the Greater Yellowstone Area. Some respondents wanted to prohibit all oil and gas development in the Primary Conservation Area or even larger areas in the Greater Yellowstone Area.

Areas available for surface occupancy will not change under the selected alternative because of the low potential and mitigation necessary. Oil and gas development inside the Primary Conservation Area will be even more unlikely with the selected alternative because of the mitigation necessary under the developed site and secure habitat standards. New proposals inside the Primary Conservation Area will need to be mitigated by closing out other types of developed sites, consolidating dispersed camping sites, or closing motorized routes to maintain the 1998 levels of developed sites and secure habitat. The Gallatin and Bridger-Teton National Forests' future oil and gas decisions will be constrained by the direction in the selected alternative

Alternative 4 was developed in response to the concern for limiting oil and gas development. It allowed us to look at the tradeoffs of not allowing any new oil and gas leases in not only the Primary Conservation Area but in a larger area as defined by Alternative 4. Not allowing any new oil and gas leases is unnecessary at this time. Outside the Primary Conservation Area, the likelihood for oil and gas development is basically the same as current management.

Even with consultation with the U.S. Fish and Wildlife Service, under Alternative 1, proposals for development would likely proceed, as a jeopardy opinion[8] is highly unlikely due to the current status of the grizzly bear population. Surface occupancy for oil and gas is allowed on approximately 37 percent of the short-term secure habitat in the area considered as the best estimate of the biologically suitable habitat outside the Primary Conservation Area. Much of this area has a very low to moderate potential for occurrence and there are only eight active leases and no active oil and gas wells. We will continue with individual leasing decisions for the six Greater Yellowstone Area national forests.

3.3 Principal reason 3 - federal, state, local, and tribal governments work together to monitor and adapt management to changing conditions and new science

We recognize the uncertainty in estimating precisely how many bears are needed and how much and what kind of habitat is required to support the grizzly bear population. This is especially difficult in relationship to potential changes in habitat due to climate change, fluctuations in annual food availability, and associated dynamics of grizzly bear social structure at various bear densities. The best approach to ensure a healthy grizzly bear population is to monitor both population and habitat parameters closely and respond with adaptive management. While the management direction in this amendment provides a firm foundation for grizzly bear habitat management, habitat management is dynamic and new information is constantly being developed. The selected alternative embraces this adaptive management approach—as conditions change, so will management direction. Future changes, based on monitoring and evaluation, will involve public collaboration.

For more than 30 years, federal, state, and other governments have been committed to the recovery of the grizzly bear in the Greater Yellowstone Area. Since 1983, the Interagency Grizzly Bear Committee has coordinated management and research actions for recovery of the grizzly bear nationwide. A subcommittee of the Interagency Grizzly Bear Committee, the Yellowstone Ecosystem Subcommittee,

[8] A jeopardy opinion is issued by the U.S. Fish and Wildlife Service when an activity or project is likely to jeopardize the continued existence of a species.

coordinates efforts specific to the Greater Yellowstone Area. The Yellowstone Ecosystem Subcommittee is comprised of representatives of the Forest Service, National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Wyoming Game and Fish Department, Idaho Department of Fish and Game, Montana Fish, Wildlife and Parks, county governments, and tribes. At the Yellowstone Ecosystem Subcommittee's biannual meetings, the public is invited to observe the proceedings and share comments and information about bear conservation. The Interagency Grizzly Bear Study Team, created in 1973, provides scientific information from monitoring and other research that is used by the Yellowstone Ecosystem Subcommittee and the Interagency Grizzly Bear Committee for adapting management and sustaining the recovered Yellowstone grizzly bear population.

With delisting of the grizzly bear, the Conservation Strategy, state grizzly bear management plans, National Park Service management plans, and this amendment provide the direction for coordinated and adaptive management of the grizzly bear and grizzly bear habitat.

The Forest Service has signed the Memorandum of Understanding detailing agency agreements to implement the Conservation Strategy. By signing the Memorandum of Understanding, we agree to:

- Use our authorities to maintain and enhance the recovered status of the grizzly bear in the Greater Yellowstone Area by implementing the regulatory mechanisms, interagency cooperation, population and habitat management and monitoring, and other provisions of the Conservation Strategy
- Be members of the Yellowstone Grizzly Coordinating Committee
- Support and be part of the adaptive management process as identified in the Biology and Monitoring Review section of the Conservation Strategy

Yellowstone Grizzly Coordinating Committee

As agreed upon in the Conservation Strategy, management of the delisted grizzly bear population will be coordinated by a new committee that will replace the Yellowstone Ecosystem Subcommittee. We (forest supervisors of the six Greater Yellowstone Area national forests) will be members of the new committee, which will be called the Yellowstone Grizzly Coordinating Committee. The Yellowstone Grizzly Coordinating Committee is the body that will coordinate management, promote the exchange of information about the Yellowstone grizzly bear population, and adapt to changing conditions and new science. The Yellowstone Grizzly Coordinating Committee will inform the Interagency Grizzly Bear Committee about the Yellowstone grizzly bear population for the benefit of grizzly bear conservation and management.

As part of the adaptive management process and within our authorities within the Yellowstone Grizzly Coordinating Committee, we will revise or amend the Conservation Strategy based on the best biological data and the best available science. Any such amendments will be subject to public review and comment.

Participation in Yellowstone Grizzly Coordinating Committee activities related to adaptive management includes:

- Ensuring population and habitat data are collected annually by the Interagency Grizzly Bear Study Team, as specified in the Conservation Strategy, and evaluated to assess the current status of the grizzly bear population
- Sharing information and implementing management actions in a coordinated fashion
- Identifying management, research, and financial needs to successfully implement the coordinated Conservation Strategy
- Implementing a Biology and Monitoring Review as necessary and submitting a petition for relisting as appropriate to ensure agency responsiveness to changing circumstances of the grizzly or its habitat in the Greater Yellowstone Area

Under the Conservation Strategy, a Biology and Monitoring Review is a process carried out by the Interagency Grizzly Bear Study Team. A Biology and Monitoring Review examines management of habitat, populations, or efforts of participating agencies to complete their required monitoring. Biology and Monitoring Reviews will be undertaken after the annual summary of monitoring information

presented to the Yellowstone Grizzly Coordinating Committee and in response to deviations from required population or habitat standards. Any Yellowstone Grizzly Coordinating Committee member agency can request a Biology and Monitoring Review be considered. Such consideration would be a topic for discussion by the Yellowstone Grizzly Coordinating Committee and the review would be initiated based on the decision of the Yellowstone Grizzly Coordinating Committee. The Biology and Monitoring Review process would be completed within six months and the resulting written report presented to the Yellowstone Grizzly Coordinating Committee and made available to the public. Two of the purposes of a Biology and Monitoring Review related to adaptive management are:

- To identify the reasons why particular demographic or habitat objectives have not been achieved and to recommend modifications to the Yellowstone Grizzly Coordinating Committee for changes as necessary
- To consider and establish a scientific basis for possible changes in management due to changed conditions in the ecosystem and make those recommendations to the Yellowstone Grizzly Coordinating Committee

The Yellowstone Grizzly Coordinating Committee will respond to the Biology and Monitoring Review in written form, through either the minutes of the Yellowstone Grizzly Coordinating Committee meeting or in specific Biology and Monitoring Review response documents, as necessary. The purpose of the Yellowstone Grizzly Coordinating Committee response is to address the issue(s) raised in the Biology and Monitoring Review with an explanation or management changes as necessary.

When habitat management changes have been identified through the Biology and Monitoring Review process, we (forest supervisors of the six Greater Yellowstone Area national forests) will use the forest plan amendment process to establish new direction or guidance for grizzly bear habitat to maintain the recovered grizzly bear population.

All action alternatives incorporate this adaptive management process to ensure continued coordination in sustaining the recovered grizzly bear population. Alternative 2-Modified goes beyond the direction in the Conservation Strategy by providing direction for coordination with states in implementing state management plans for grizzly bear occupancy outside the Primary Conservation Area. Additionally, the selected alternative provides direction for local public involvement in implementing food storage regulations in the areas determined to be biologically suitable and socially acceptable for grizzly bears outside the Primary Conservation Area. Additional monitoring added to the selected alternative outside the Primary Conservation Area will help provide a better picture of habitat conditions for grizzly bears in the Greater Yellowstone Area for adaptive management decisions by the Yellowstone Grizzly Coordinating Committee.

Alternative 4 provides direction for grizzly bear habitat outside the Primary Conservation Area. The strict requirements allow little room for flexibility in accommodating other uses and local considerations. The adaptive management approach described above, when coupled with using best available science in decision making, will ensure a timely response if conditions change for the grizzly bear. We will be able to make necessary adjustments in habitat monitoring and management in order to sustain a recovered grizzly bear population.

Part 4 Implementation

This forest plan amendment will be implemented no sooner than five (5) working days after the Final Rule delisting the Yellowstone grizzly population has been published in the Federal Register. If the grizzly bear is not delisted, existing forest plan direction for grizzly bears will remain in place.

The Interagency Grizzly Bear Guidelines and management situations as defined in the 1986 Guidelines no longer apply (except for Management Situation 3 on the Targhee National Forest).

If litigation occurs, implementation of the standards and guidelines depends on whether the court issues an injunction. Should the delisting of the grizzly bear be overturned, existing forest plan direction for grizzly bears would remain in place.

The Conservation Strategy emphasizes the importance of continued coordination and cooperative working relationships among management agencies to continue application of best available science and maintain effective actions to benefit the coexistence of grizzly bears and humans in the ecosystem. Through membership in the Yellowstone Grizzly Coordinating Committee, the Forest Service will work cooperatively with state wildlife management agencies and the National Park Service to meet the population goals identified in the Conservation Strategy and occupancy goals for biologically suitable and socially acceptable habitats as identified in the state grizzly bear management plans. The Wyoming Game and Fish Department has identified the biologically suitable and socially acceptable area for grizzly bears outside the Primary Conservation Area in Wyoming. Idaho's and Montana's state grizzly bear management plans have not yet identified specific areas that are socially acceptable for grizzly bear occupancy outside the Primary Conservation Area and will likely only do so on a case-by-case basis.

Further direction in special orders, cooperative agreements, and the Forest Service directives system will be followed; regional supplements to Forest Service Manual 2600, chapter 2670, will be approved before the grizzly bear is delisted and will include direction designating the grizzly bear as a sensitive species in Forest Service Regions 1 (Northern Region), 2 (Rocky Mountain Region), and 4 (Intermountain Region).

As forest plans are revised under the 2005 Forest Service planning regulations, the grizzly bear is expected to be designated a species of concern. The Forest Service provided the following statements to the U.S. Fish and Wildlife Service on March 23, 2006:

> After delisting, grizzly bears will be managed as a sensitive species on the six Yellowstone area National Forests under their amended land management plans. Under future revisions of these plans, we expect that grizzly bears will be designated as a "species of concern" (FSH 1909.12.43.22b (5)). This will ensure that components of the revised land management plans will provide the appropriate ecological conditions (i.e., habitats) necessary to continue to provide for a recovered population (FSM 1921.76c). In this way, the intent of the habitat standards in the Conservation Strategy and the amended land management plans will be perpetuated in future plans as they are revised.

Transition to the direction in this amendment

This decision does not affect or apply to existing occupancy and use authorized by permits, contracts, or other instruments implementing approved projects and activities. Using the monitoring items described in the appendix of this Record of Decision, ongoing projects other than those authorized by permits, contracts, or other instruments will be evaluated for compliance with the new direction. Any projects not in compliance with this direction will be mitigated using the Application Rules. All future projects will comply with the direction in this amendment.

4.1 Delisting

The U.S. Fish and Wildlife Service reviewed the status of the Yellowstone grizzly bear population under the Endangered Species Act and published the Proposed Rule to remove the Yellowstone Distinct

Population Segment from the federal list of endangered and threatened wildlife in the Federal Register on November 17, 2005[9].

After reviewing comments, the Final Rule regarding the proposal to delist the Yellowstone grizzly bear population will be published in the Federal Register. The Final Rule will address the status of the Yellowstone grizzly bear population according to the five factors in section 4(a)(1) of the Endangered Species Act. These factors include population and habitat status and the existence of adequate regulatory mechanisms, as described in the Conservation Strategy and other appropriate direction. This analysis will result in a determination by the U.S. Fish and Wildlife Service whether to delist the Yellowstone population or maintain protection under the Endangered Species Act. If the determination is that the bear no longer meets the Endangered Species Act's definition of threatened or endangered, the publication of the Final Rule will change the status of the Yellowstone grizzly bear population—the population will no longer be a listed species.

Part 5 Public involvement and issues

5.1 Public involvement process

The scoping period began when a Notice of Intent to prepare an environmental impact statement was published in the Federal Register on July 16, 2003. The Notice of Intent asked for public comment on the proposal from July 16 through August 15, 2003. On August 12, 2003, a revised Notice of Intent was published, extending the comment period to September 2, 2003. Additionally, as part of the public involvement process, a description of the proposed action was:

- Mailed to 3,577 individuals, organizations, and agencies in July 2003
- Published in news releases in local Greater Yellowstone Area newspapers
- Posted on the Web at http://www.fs.fed.us/r1/wildlife/igbc/Subcommittee/yes/YEamend/gb_internet.htm
- Listed on each forest's quarterly Schedule of Proposed Actions report beginning in the summer of 2003

Briefings were held with individuals and organizations, as requested. An email address was established to receive comments electronically. Nearly 55,000 responses were received, including 396 original responses and 54,505 organized campaign responses.

The Notice of Availability of the Draft Environmental Impact Statement was published in the Federal Register on August 13, 2004. The Draft Environmental Impact Statement was available on the Web and was mailed to 872 individuals, organizations, and agencies. Five open houses were held throughout the Greater Yellowstone Area. The 90-day comment period ended November 12, 2004. The Forest Service received 675 original responses and 44,984 organized campaign responses.

5.2 Summary of public comment

Public comment on the Draft Environmental Impact Statement was far-reaching, often highly detailed, and represented a wide range of values and perspectives with respect to grizzly bear management and area management in general.

Respondents expressed different views regarding the proposed forest plan amendment in the Draft Environmental Impact Statement. In general, people took one of two positions: preservation management as an objective of the Forest Service with support for continued federal protection of grizzly bears, or

[9] Federal Register Vol. 70, No. 221. Department of the Interior. Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Designating the Greater Yellowstone Ecosystem Population of Grizzly Bears as a Distinct Population Segment; Removing the Yellowstone Distinct Population Segment of Grizzly Bears from the Federal List of Endangered and Threatened Wildlife; Proposed Rule.

multiple use management of national forests with support for delisting grizzly bears as this is seen as a positive step toward more state and local management of public lands.

Many respondents felt Alternative 2 was the best option for grizzly bears and the Greater Yellowstone Area because it allowed for multiple use management of public lands. These writers assert that the Forest Service, as mandated in the National Forest Management Act, should manage for "sustained yields of multiple use." A number of respondents valued motorized recreational use of public lands and felt Alternative 2 adequately accounted for this recreational activity. Additional multiple uses of value included livestock grazing rights and natural resource development. Other writers suggested Alternative 2 is supported by science and maintains consistency with other Forest Service plans. As one respondent stated, "More restrictive policies and standards are not required for grizzly management," and "The recovered population is no longer threatened or endangered."

Others believed that Alternative 1 is the best option because current forest plans provide suitable and adequate amounts of habitat for recovery of a viable grizzly bear population; what is not broken does not need to be fixed. "The current plans are working—they brought about the recovery." There is a perception that Alternatives 2, 3, and 4 would impose more restrictions on multiple use of public lands.

On the other hand, a number of respondents viewed Alternative 4 as the best alternative, given its emphasis on protected grizzly bear habitat. These writers state that Alternative 4 is the environmentally preferred option and is the only option to provide adequate protection for long-term grizzly bear survival.

A number of others mentioned the Forest Service should prohibit resource development and livestock grazing on public lands in the interest of preserving natural wildlife and wild and pristine areas. One respondent described the Forest Service as the "stewards of our natural, national heritage." Still another respondent expressed the philosophy of many preservation management respondents that limitations on human uses are a worthwhile sacrifice "in order for the grizzly to survive and continue its protection."

These different views frame the significant number of requests made by the public. Respondents submitted many requests for modification of alternatives regarding grizzly bear management and the proposed management of the Greater Yellowstone Area. These numerous requests relative to specific areas of management, in conjunction with all other concerns raised by the public, reveal how important Yellowstone grizzly bears and the Greater Yellowstone Area are to the public.

5.3 Government consultation

No American Indian reservations are located within the Primary Conservation Area. Several tribes have trust and treaty responsibilities and interests in the Greater Yellowstone Area.

Forest supervisors consulted with the Crow, Nez Perce, Northern Arapaho, Northern Cheyenne, Salish Kootenai, Shoshone, and Shoshone-Bannock tribes to initiate consultation regarding this forest plan amendment. Tribes were given the opportunity to provide input during the scoping period and during development of the Draft and Final Environmental Impact Statements.

5.4 Issues

As a result of the public participation process; review by other federal, state, tribal, and local government agencies; and internal reviews, significant issues were identified and are described in detail in chapter 1 in the Final Environmental Impact Statement. Some issues were used as a basis for developing alternatives. Other issues were used in development of mitigation measures, incorporated into management direction and guidance, or used to analyze effects.

Issue 1—adequate habitat standards

Many respondents requested more restrictive habitat standards or an extension of habitat standards to lands outside the Primary Conservation Area, or both, to provide additional protection for the grizzly bear, including habitat connectivity within the Greater Yellowstone Area. Some respondents requested the elimination of temporary changes in secure habitat, no new developed sites, mandatory phase out of sheep grazing, and establishing road density standards. Some felt logging would degrade habitat for the

bear. Others felt habitat standards should be extended to areas outside the Primary Conservation Area. Others requested fewer restrictions, including omitting the Plateau Bear Management Unit from habitat standards. Many respondents had concerns about 1998 as a baseline for resource management. Although the grizzly bear population achieved all demographic recovery targets by 1998 with this management regime in place, some respondents felt the baseline could be adjusted to allow either more management flexibility or increased protections for the grizzly bear. Some respondents mentioned key roadless areas for maintaining secure habitat.

Issue 2—changes in the Primary Conservation Area boundary

There were concerns about the size of the Primary Conservation Area. Some felt the size of the Primary Conservation Area is adequate because it has allowed the grizzly bear population to achieve all demographic recovery targets. Others felt the Primary Conservation Area is too small as habitats outside the Primary Conservation Area have been occupied by grizzly bears and contributed to the recovery of the grizzly bear. Others felt the Primary Conservation Area should be smaller and the numbers of bears reduced.

Issue 3—recreation opportunities

Many respondents had concerns that the habitat standards would result in reduced motorized recreation opportunities and in closing more roads. Some respondents were concerned about public safety while recreating in grizzly bear habitat. Although not part of the proposed action, concerns about food storage requirements were expressed and some respondents felt that black bear baiting should be restricted in grizzly bear habitat. There were concerns about the effects to special use permitted resorts, ski areas, and lodges if developed sites were limited to 1998 levels. Additionally, some respondents felt information and education could play an important role in how to recreate in bear country.

Issue 4—social and economic effects

Some respondents were concerned with the effects on income, employment, and lifestyle changes related to livestock operations, ranches, people associated with the timber industry, and recreation-related businesses. Some counties have passed resolutions banning the presence of grizzly bears and are concerned about the social and economic well being of their areas. Some expressed that reduced grazing could accelerate the breakup of ranches into subdivisions in the Greater Yellowstone Area if ranching were not economically viable.

Issue 5—vegetation, fuels, and access

Some respondents, including land managers, were concerned the standards would be too restrictive and would affect the ability to manage hazardous fuels; programs such as the Healthy Forests Initiative would be compromised and treatment of fuels in the wildland urban interface could be affected. Managers were concerned the proposed action (Alternative 2) would limit the administrative use of roads and motorized trails and the construction of roads and motorized trails—this potentially influences activities such as timber harvest, wildfire suppression, administrative management activities, and other uses associated with Forest Service roads and motorized trails.

Issue 6—minerals

Some respondents were concerned the habitat standards would limit oil and gas and mining and exploration programs because of limitations on developed sites and secure habitat. Others felt additional restrictions should be imposed on these programs.

Issue 7—food source stability

Some respondents said threats to food sources are not fully understood and must be further studied, suggesting major foods for bears, such as army cutworm moths, spawning cutthroat trout, whitebark pine nuts, and wild ungulate carcasses may not be available in future years because of disease or other threats. Some said fire prevention is a prime factor in the decline of whitebark pine. Some respondents felt that due to the uncertainty of the loss of these major foods, a larger area should be managed for grizzly bears.

Issue 8—connectivity and linkage between the six Greater Yellowstone Area national forests

Some respondents felt the ability for bears to move between important habitats in the Greater Yellowstone Area should be addressed. They suggested the Forest Service should increase efforts to

make the landscape in these linkage areas less lethal for bears through implementation of food storage requirements, elimination of domestic sheep, and habitat maintenance and restoration of degraded areas.

Issue 9—commercial livestock grazing

Some respondents were concerned about how much impact the habitat standards would have on livestock grazing, and in particular, what the effects would be from phasing out sheep grazing. Grizzly bear/livestock conflicts were also a concern, as well as changes in livestock operations.

Part 6 Alternatives considered

6.1 Alternatives considered in detail in the Final Environmental Impact Statement

Alternative 1—no action

Alternative 1 was the no action alternative. National Environmental Policy Act regulations require the Forest Service to identify the no action alternative and use it as a baseline for comparing the environmental consequences of the other alternatives (40 CFR 1502.14(d), and Forest Service Handbook 1909.15 Environmental Policy and Procedures, 14.1).

Under Alternative 1, current forest plans would continue to guide management of grizzly bear habitat in the recovery zone. Further direction in special orders, biological opinions issued by the U.S. Fish and Wildlife Service, cooperative agreements, and Forest Service manual and handbook direction would be followed.

The grizzly bear would retain its protected, threatened status under the Endangered Species Act and all forests would continue to consult with the U.S. Fish and Wildlife Service on all actions authorized, permitted, or carried out by the Forest Service.

Alternative 2—proposed action and preferred alternative in the Draft Environmental Impact Statement

Alternative 2 was presented as the proposed action during the scoping period and the preferred alternative in the Draft Environmental Impact Statement. The purpose of this alternative was to implement the appropriate habitat standards and monitoring protocols as documented in the Conservation Strategy.

This alternative would provide additional programmatic direction in the form of habitat standards and guidelines for management of grizzly bear habitat security, developed sites, nuisance grizzly bear management, and livestock grazing within the Primary Conservation Area. All standards applied only to the Primary Conservation Area.

Standards were based on 1998 human activity levels. By 1998, all demographic recovery criteria were met. The assumption was the levels of habitat security and other habitat conditions in 1998 provided the base environment that led to the recovery of the Yellowstone grizzly bear population.

Alternative 2-Modified—selected alternative

Alternative 2-Modified was developed in response to comments received on the Draft Environmental Impact Statement. A key concern was the lack of direction outside the Primary Conservation Area for grizzly bear habitat management. Alternative 2-Modified is similar to Alternative 2 but adds direction and guidance for management of grizzly bears related to livestock grazing, food storage, food sources, and monitoring of secure habitat, both inside and outside the Primary Conservation Area. Standard 4 of Alternative 2, stating that guidelines and management situations would no longer apply, was dropped because that direction will be described in this decision document.

Alternative 3

Alternative 3 was developed in response to comments suggesting the Forest Service provide more restrictive habitat protection for the grizzly bear inside the Primary Conservation Area. The purpose was to address the potential loss of major bear foods and further reduce the potential for grizzly bear/human conflicts and bear mortality inside the Primary Conservation Area. This alternative maintained the size of

the area where management direction would favor grizzly bears with more restrictive standards. The major differences between Alternatives 2 and 3 are that:

- No permanent or temporary reduction in secure habitat would be allowed and secure habitat would be increased
- Proposed increases in developed sites or capacity of developed sites could not be mitigated and would not be allowed
- Sheep grazing inside the Primary Conservation Area would be eliminated within three years, rather than phased out

Alternative 3 would require additional restrictions to resolve grizzly bear/human conflicts and protect important food sources, restrict off-road travel (except over-the-snow use) to designated routes, eliminate over-the-snow use in grizzly bear denning areas, and not allow new oil and gas leases.

Standards were based on 1998 human activity levels. The secure habitat and developed site standards would apply to each of the Bear Management Unit subunits on National Forest System lands inside the Primary Conservation Area.

Alternative 4—environmentally preferred

This alternative was developed in response to comments suggesting the Forest Service extend grizzly bear habitat protection beyond the Primary Conservation Area. The purpose was to address the potential future loss of major bear foods, increase the probability of habitat connectivity with other ecosystems, improve linkage and connectivity between key habitats within the six Greater Yellowstone Area national forests, and further reduce the potential for grizzly bear/human conflicts and bear mortality throughout the Greater Yellowstone Area.

This alternative increased the size of the area where management direction would favor grizzly bears with the more restrictive standards described for Alternative 3. For Alternative 4, the boundary outside the Primary Conservation Area and the standards and guidelines were developed using information obtained from scoping. Existing evaluations of suitable habitat and linkage areas for grizzly bears within the six Greater Yellowstone Area national forests were used as the basis for delineation of this boundary (Walker and Craighead 1997, Willcox and Ellenberger 2000, Merrill and Mattson 2004).

Standards were based on 1998 human activity levels inside the Primary Conservation Area and 2003 levels in areas outside the Primary Conservation Area. The secure habitat and developed site standards would have applied to each of the Bear Management Unit subunits and analysis areas on National Forest System lands inside this delineated area.

6.2 Alternatives not considered in detail

Alternative 5

Alternative 5 proposed implementation of the appropriate habitat standards and monitoring protocols as documented in the Conservation Strategy (similar to Alternative 2), plus less restrictive habitat direction for areas outside the Primary Conservation Area. These areas were described in the state management plans. The interdisciplinary team initiated detailed study of this alternative until determining it was similar to Alternative 4. Alternative 5 would extend habitat standards outside the Primary Conservation Area to nearly the same area as Alternative 4. Standards would be less restrictive than Alternative 4. A complete analysis was unnecessary because effects would have been within the range of effects for Alternatives 2 and 4.

Alternative 6

This alternative was developed in response to public comments suggesting the Forest Service reduce the area of habitat protection and the amount of restrictions for the grizzly bear. In particular, the Plateau Bear Management Unit would be removed from the Primary Conservation Area. This alternative was not given further detailed study because it did not meet the purpose and need for action, which is to ensure conservation of habitat to support continued recovery of the grizzly bear population in the Greater Yellowstone Area national forests.

During the planning process to revise the Targhee Forest Plan, public comments were received suggesting that the Plateau Bear Management Unit be removed. This suggestion was made based on the perception that the Plateau Bear Management Unit was poor quality habitat and had low grizzly bear use.

During 1993 and 1994, a technical committee appointed by the Yellowstone Ecosystem Subcommittee conducted a study to evaluate habitat capability and grizzly bear use in the Plateau Bear Management Unit. Results and recommendations from that study are summarized in the Final Environmental Impact Statement (section 2.2.2).

Other alternatives

Many public comments included variations on providing additional habitat protection for the grizzly bear through extension of habitat standards beyond the Primary Conservation Area. Some of the reasons were to address the potential future loss of major bear foods and increase the probability of habitat connectivity with other ecosystems. Some comments called for extending habitat standards either to occupied grizzly bear habitat, or to inventoried roadless areas, or to all National Forest System lands in the Greater Yellowstone Area. These alternatives were combined and are represented by Alternative 4.

Another suggestion was termination or removal of existing oil and gas leases as one variation of Alternative 4. The variation was not considered in detail because the Forest Service and Bureau of Land Management have limited opportunities to implement this alternative. For more discussion, see section 2.2.3 in the Final Environmental Impact Statement.

Part 7 Legally required findings

7.1 National Environmental Policy Act

Consideration of long- and short-term effects

The Final Environmental Impact Statement considered current effects to the significant issues and other resources and projected effects from 10 to 25 years.

Unavoidable adverse effects

Decisions made on this forest plan amendment do not represent irreversible or irretrievable commitments of resources. Any proposed disturbance to resources cannot occur without further analyses and decision documents. For a detailed discussion of effects, see chapter 3 of the Final Environmental Impact Statement.

Environmentally preferable alternative(s)

Regulations implementing the National Environmental Policy Act require agencies to specify "the alternative or alternatives which are considered to be environmentally preferable" (40 CFR 1505.2(b)). The environmentally preferable alternative causes the least damage to the biological and physical environments and best protects, preserves, and enhances historical, cultural, and natural resources. Based on the description of the alternatives considered in detail in the Final Environmental Impact Statement and this Record of Decision, we have determined that Alternative 4 best meets the goals of Section 101 of the National Environmental Policy Act and is therefore the environmentally preferable alternative for this proposed federal action.

7.2 National Forest Management Act

We find that this amendment is not significant under the National Forest Management Act regulations, based on our evaluation of the four factors described below. This finding is made pursuant to the 1982 National Forest Management Act regulations as allowed for by the 2005 National Forest Management Act regulations at 36 CFR 219.14(d)(2).

The 1982 National Forest Management Act regulations direct that "based on an analysis of the objectives, guidelines, and other contents of the Forest Plan, the Forest Supervisor shall determine whether a proposed amendment would result in a significant change in the plan. If the change resulting

from the proposed amendment is determined to be significant, the Forest Supervisor shall follow the same procedure as that required for development and approval of a Forest Plan [i.e., conduct a plan revision]. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, the Forest Supervisor may implement the amendment following appropriate public notification and satisfactory completion of National Environmental Policy Act procedures" (36 CFR 219.10(f) (1982). The test we are using to determine significance for the forest plan amendment includes four factors.

Timing

Identify when the change is to take place. Determine whether the change is necessary during or after the plan period (the first decade) or whether the change is to take place after the next scheduled revision of the forest plan.

Figure 7 displays the approval dates for the forest plans for the six forests as well as the proposed completion dates for their revisions. The amendment takes place late in the life of the plans and according to the FSH 1909.12, chapter 5.32, "the later the change, the less likely it is to be significant for the current forest plan." Although this amendment occurs late in the lifespan of the forest plans, these changes are necessary to ensure conservation of habitat to sustain the recovered Yellowstone grizzly bear population.

Location and size

Determine the location and size of the area involved in the change. Define the relationship of the affected area to the overall planning area.

In reviewing the Final Environmental Impact Statement, we concluded that although the six Greater Yellowstone Area national forests (the planning area) include a very large area—approximately 13 million acres—the standards and some guidelines apply only to the Primary Conservation Area, which is 28 percent of the planning area. Other guidelines will apply to areas determined to be socially acceptable and biologically suitable for grizzly bears, which could include an additional 50 percent of the planning area outside the Primary Conservation Area.

Goals, objectives, and outputs

Determine whether the change alters long-term relationships between the levels of goods and services projected by the forest plan. Consider whether an increase in one type of output would trigger an increase or decrease in another. Determine where there is a demand for goods or services not discussed in the forest plan.

Amendment of the plans for grizzly bear habitat conservation as outlined in Alternative 2-Modified will not alter the level of goods and services provided on the six national forests in the Greater Yellowstone Area. We have considered effects on key goods and services that are provided by the Greater Yellowstone Area national forests, including recreation, livestock grazing, timber harvest, fire management, and minerals. We determined the levels of goods and services can continue at present levels and the amendments will not alter long-term relationships between the levels of goods and services projected by the forest plan.

Management prescription

Determine whether the change in a management prescription is only for a specific situation or whether it would apply to future decisions throughout the planning areas. Determine whether the change alters the desired future condition of the land and resources or the anticipated goods and services to be produced.

This action does not change management prescriptions or alter management area boundaries. It does not alter the desired future condition of the land and resources or the anticipated goods and services to be produced.

Figure 7. Land and resource management plans to be amended.

National forest	Forest Service region	Land and resource management plan to be amended	Year plan approved	Year scheduled for plan revision completion[1]
Beaverhead-Deerlodge	Region 1	Beaverhead Forest Plan	1986	2006
Bridger-Teton	Region 4	Bridger-Teton National Forest Land and Resource Management Plan	1990	2007
Caribou-Targhee	Region 4	1997 Revised Forest Plan—Targhee National Forest	1997	2010
Custer	Region 1	Custer National Forest and Grasslands Land and Resource Management Plan (amendment applies only to the Beartooth Ranger District)	1986	2009
Gallatin	Region 1	Gallatin National Forest Plan	1987	2009
Shoshone	Region 2	Shoshone National Forest Land and Resource Management Plan	1986	2007

[1] USDA Forest Service 2005d.

7.3 Endangered Species Act

The Endangered Species Act creates an affirmative obligation ". . . that all federal departments and agencies shall seek to conserve endangered and threatened (and proposed) species" of fish, wildlife, and plants. This obligation is further clarified in a National Interagency Memorandum of Agreement (August 30, 2000) which states our shared mission to ". . . enhance conservation of imperiled species while delivering appropriate goods and services provided by the lands and resources."

Based upon a consultation agreement with the USFWS and in accordance with Forest Service direction for listed species, we completed biological assessments for all listed species. For all listed species, except the grizzly bear and the gray wolf, we determined the preferred alternative would have "no effect" on these species. The determination for the gray wolf was that the preferred alternative was "not likely to jeopardize the continued existence" of the gray wolf. The determination for the grizzly bear was "not likely to adversely effect." Biological assessments were submitted to the USFWS as a courtesy, but are not required for "no effect" determinations. The USFWS provided written review as required by Section 7 of the ESA for the gray wolf and grizzly bear.

7.4 National Historic Preservation Act

This forest plan amendment is a programmatic action and does not authorize site-specific activities. Projects undertaken in response to the direction in the amendment will comply fully with the laws and regulations that ensure protection of cultural resources.

It is our determination that the forest plan amendment complies with the National Historic Preservation Act and other statutes that pertain to the protection of cultural resources.

7.5 Invasive Species (Executive Order 13112)

Executive Order 13112 directs federal agencies not to authorize any activities that would increase the spread of invasive species. The forest plan amendment is a programmatic action and does not authorize site-specific activities.

We have determined the forest plan amendment complies with Executive Order 13112.

7.6 Environmental Justice (Executive Order 12898)

Executive Order 12898 directs federal agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

We have determined from the analyses disclosed in the Final Environmental Impact Statement that the forest plan amendment complies with Executive Order 12898.

7.7 Prime Farmland, Rangeland, and Forest Land

We have determined from the analyses disclosed in the Final Environmental Impact Statement that prime farmland, rangeland, and forest land will not be affected because the selected alternative is a programmatic action and does not authorize site-specific activities.

7.8 Equal Employment Opportunity, Effects on Minorities, Women

The Final Environmental Impact Statement describes the impacts to social and economic factors in chapter 3. The selected alternative will not have a disproportionate impact on any minority or low-income communities. We have determined the selected alternative will not differentially affect the civil rights on any citizens, including women and minorities.

7.9 Wetlands and Floodplains (Executive Orders 11988 and 11990)

The selected alternative is a programmatic action and does not authorize site-specific activities. We have determined the selected alternative will not have adverse impacts on wetlands and floodplains and will comply with Executive Orders 11988 and 11990.

7.10 Other policies

The existing body of national direction for managing national forests remains in effect.

Part 8 Administrative review

This decision is subject to review pursuant to 36 CFR 217.3. Any appeals must be postmarked or received by the Appeal Reviewing Officer within 45 days of the date the legal notice is published in the Cody Enterprise, the lead newspaper of record. Courtesy notices will be published in other newspapers, but the publication date in the Cody Enterprise determines the appeal period.

Appeals must be sent to:

Regional Forester
Intermountain Region USFS
324 25th Street
Ogden, UT 84401

Appeals may be hand-delivered to the above address during regular business hours, 8:00 am to 4:30 pm Monday through Friday, excluding holidays; or sent by fax to 801.625.5277; or by email to appeals-intermtn-regional-office@fs.fed.us. Emailed appeals must be submitted in rich text format (.rtf) or Word (.doc) and must include the project name in the subject line.

Any notice of appeal must be fully consistent with 36 CFR 217.9 and include at a minimum:

- A statement that the document is a Notice of Appeal filed pursuant to 36 CFR Part 217
- The name, address, and telephone number of the appellant
- Identify the decision to which the objection is being made
- Identify the document in which the decision is contained, by title and subject, date of the decision, and name and title of the Deciding Officer

- Specifically identify the portion(s) of the decision to which objection is made
- The reasons for the appeal, including issues of fact, law, regulation, or policy and, if applicable, specifically how the decision violates law, regulation, or policy
- Identification of the specific change(s) in the decision that the appellant seeks

8.1 Further information and contact person

The Forest Plan Amendment for Grizzly Bear Habitat Conservation for the Greater Yellowstone Area National Forests Final Environmental Impact Statement, Executive Summary, and this Record of Decision are available on the Web at
http://www.fs.fed.us/r1/wildlife/igbc/Subcommittee/yes/YEamend/gb_internet.htm

For further information regarding the Final Environmental Impact Statement, Record of Decision, or amendment, contact:

Mr. Kim Barber
Shoshone National Forest
808 Meadow Lane Avenue
Cody, WY 82414
Telephone 307.527.6241

8.2 Responsible officials

Bruce Ramsey — 4-18-06
Bruce Ramsey — Date
Forest Supervisor, Beaverhead-Deerlodge National Forest

Kniffy Hamilton — April 18, 2006
Carole 'Kniffy' Hamilton — Date
Forest Supervisor, Bridger-Teton National Forest

Lawrence A Timchak — 4-18-06
Lawrence A. Timchak — Date
Forest Supervisor, Caribou-Targhee National Forest

Nancy T. Curriden — April 18, 2006
Nancy T. Curriden — Date
Forest Supervisor, Custer National Forest

Rebecca Heath — April 18, 2006
Rebecca Heath — Date
Forest Supervisor, Gallatin National Forest

Rebecca Aus — April 18, 2006
Rebecca Aus — Date
Forest Supervisor, Shoshone National Forest

Appendix—Forest plan amendment for grizzly bear habitat conservation

This Forest Plan Amendment for Grizzly Bear Habitat Conservation amends forest plans on the six Greater Yellowstone Area national forests: the Beaverhead-Deerlodge, Bridger-Teton, Caribou-Targhee, Custer, Gallatin, and Shoshone National Forests.

This is

- Amendment Number 10 to the 1986 Beaverhead Forest Plan
- Amendment Number 8 to the 1990 Bridger-Teton National Forest Land and Resource Management Plan
- Amendment Number 3 to the 1997 Revised Forest Plan—Targhee National Forest
- Amendment Number 42 to the 1987 Custer National Forest and Grasslands Land and Resource Management Plan
- Amendment Number 27 to the 1987 Gallatin National Forest Plan
- Amendment Number 2006-001 to the 1986 Shoshone National Forest Land and Resource Management Plan

Introduction

The goal, standards, guidelines, and monitoring described in this amendment provide management direction to ensure conservation of grizzly bear habitat to support the recovered Yellowstone grizzly bear population inside and outside the Primary Conservation Area.

The purpose and need for this amendment is to:

- Ensure conservation of grizzly bear habitat to support the recovered Yellowstone grizzly bear population
- Update the management and monitoring of grizzly bear habitat to incorporate recent interagency recommendations and agreements, as described in the Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area
- Improve consistency among Greater Yellowstone Area national forests in managing grizzly bear habitat
- Ensure the adequacy of regulatory mechanisms for grizzly bear habitat protection upon delisting as identified in the Grizzly Bear Recovery Plan

The Forest Service, as a signee of the Memorandum of Understanding detailing agency agreements to implement the Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area (Conservation Strategy), uses its authorities to maintain and enhance the recovered status of the grizzly bear in the Greater Yellowstone Area. This includes implementing the regulatory mechanisms, interagency cooperation, population and habitat management and monitoring, and other provisions of the Conservation Strategy. The Forest Service is a member of the Yellowstone Grizzly Coordinating Committee and is part of the adaptive management process as identified in the Biology and Monitoring Review section of the Conservation Strategy.

Further direction in special orders, cooperative agreements, and the Forest Service directives system will be followed; regional supplements to Forest Service Manual 2600, chapter 2670, will be approved before the grizzly bear is delisted and will include direction designating the grizzly bear as a sensitive species in Forest Service Regions 1 (Northern Region), 2 (Rocky Mountain Region), and 4 (Intermountain Region).

As forest plans are revised under the 2005 Forest Service planning regulations, the grizzly bear is expected to be designated a species of concern. The Forest Service provided the following statements to the U.S. Fish and Wildlife Service on March 23, 2006:

> After delisting, grizzly bears will be managed as a sensitive species on the six Yellowstone area National Forests under their amended land management plans. Under future revisions of these plans, we expect that grizzly bears will be designated as a “species of concern” (FSH 1909.12.43.22b (5)). This will ensure that components of the revised land management plans will provide the appropriate ecological conditions (i.e., habitats) necessary to continue to provide for a recovered population

(FSM 1921.76c). In this way, the intent of the habitat standards in the Conservation Strategy and the amended land management plans will be perpetuated in future plans as they are revised.

While the management direction in this amendment provides a firm foundation for grizzly bear habitat management, the Forest Service recognizes that habitat management is dynamic and that new information is constantly being developed. The direction in this amendment embraces an adaptive management approach—as conditions change, so will management direction. Future changes, based on monitoring and evaluation, will involve public involvement and collaboration and will incorporate best available science.

How this amendment is organized

This amendment is organized into four parts.

Part 1 describes the grizzly bear habitat conservation goal, standards and Application Rules, guidelines and Application Rules, and monitoring.

Part 2 describes the 1998 baseline values for habitat standards inside the Primary Conservation Area and habitat effectiveness.

Part 3 is the nuisance bear standards from the 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area.

Part 4 includes the following figures:

- Figure A-1. Criteria and definitions used in this amendment.
- Figure A-2. Map showing Bear Management Units and subunits in the Primary Conservation Area.
- Figure A-3. General Bear Management Unit subunit information inside the Primary Conservation Area.
- Figure A-4. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile and TMARD >2 miles per square mile for 40 Bear Management Unit subunits in the Greater Yellowstone Area. Includes Forest Service, Bureau of Land Management, state, county, and private motorized access routes.
- Figure A-5. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile and TMARD >2 miles per square mile for 40 Bear Management Unit subunits in the Greater Yellowstone Area. Includes only private roads and state and county highways.
- Figure A-6. Acres and national forest/national park overlap when applying the 1 percent rule.
- Figure A-7. The 1998 baseline for numbers of developed sites.
- Figure A-8. Number of mining claims as of 1998.
- Figure A-9. Number of commercial livestock grazing allotments and sheep animal months in 1998.
- Figure A-10. 1998 Cumulative Effects Model habitat effectiveness values by season.

Amendment part 1—Goal, standards, guidelines, and monitoring

Within the Primary Conservation Area, there are 18 Bear Management Units and 40 Bear Management Unit subunits totaling 5,894,000 acres (Figures A-2, A-3, and A-4). The major land management agencies include six national forests and two national parks.

Grizzly bear habitat conservation goal

Manage grizzly bear habitat within the Primary Conservation Area to sustain the recovered Yellowstone grizzly bear population. Outside the Primary Conservation Area in areas identified in state grizzly bear management plans as biologically suitable and socially acceptable for grizzly bear occupancy, accommodate grizzly bear populations to the extent that accommodation is compatible with the goals and objectives of other uses.

Grizzly bear habitat conservation standard for secure habitat

Inside the Primary Conservation Area, maintain the percent of secure habitat in Bear Management Unit subunits at or above 1998 levels. Projects that change secure habitat must follow the Application Rules.

Application Rules for changes in secure habitat

Permanent changes to secure habitat. A project may permanently change secure habitat if secure habitat of equivalent habitat quality (as measured by the Cumulative Effects Model or equivalent technology) is replaced in the same Bear Management Unit subunit. The replacement habitat must be maintained for a minimum of 10 years and be either in place before project implementation or concurrent with project development. Increases in secure habitat may be banked to offset the impacts of future projects of that administrative unit within that subunit.

Temporary changes to secure habitat. Projects can occur with temporary reductions in secure habitat if all the following conditions are met:

- Only one active project per Bear Management Unit subunit can occur at any one time.
- The total acreage of active projects within a given Bear Management Unit does not exceed 1 percent of the acreage in the largest subunit within that Bear Management Unit (Figure A-6). The acreage of a project that counts against the 1 percent limit is the acreage associated with the 500-meter buffer around any gated or open motorized access route or recurring low level helicopter flight line, where the buffer extends into secure habitat.
- To qualify as a temporary project, implementation will last no longer than three years.
- Secure habitat must be restored within one year after completion of the project.
- Project activities should be concentrated in time and space to the extent feasible.

Acceptable activities in secure habitat. Activities that do not require road construction, reconstruction, opening a permanently restricted road, or recurring helicopter flight lines at low elevation do not detract from secure habitat. Examples of such activities include thinning, tree planting, prescribed fire, trail maintenance, and administrative studies/monitoring. Activities should be concentrated in time and space to the extent feasible to minimize disturbance. Effects of such projects will be analyzed in the National Environmental Policy Act process.

- Helicopter use for short-term activities such as prescribed fire ignition/management, periodic administrative flights, fire suppression, search and rescue, and other similar activities do not constitute a project and do not detract from secure habitat.
- Motorized access routes with permanent barriers, decommissioned or obliterated roads, non-motorized trails, winter snow machine trails, and other motorized winter activities do not count against secure habitat.
- Project activities occurring between December 1 and February 28 do not count against secure habitat.
- Minimize effects on grizzly habitat from activities based in statutory rights, such as access to private lands under the Alaska National Interest Lands Conservation Act and the 1872 General Mining Law. Where the mitigated effects exceed the 1998 baseline within the affected subunit, compensate secure habitat to levels at or above the 1998 baseline, in this order: 1) in adjacent subunits, or 2) nearest subunits, or 3) in areas outside the Primary Conservation Area adjacent to the subunit impacted.
- Honor existing oil and gas and other mineral leases. Proposed Applications for Permit to Drill and operating plans within those leases should meet the Application Rules for changes in secure habitat. New leases, Applications for Permit to Drill, and operating plans must meet the secure habitat and developed site standards.

Grizzly bear habitat conservation standard for developed sites

Inside the Primary Conservation Area, maintain the number and capacity of developed sites at or below 1998 levels, with the following exceptions: any proposed increase, expansion, or change of use of developed sites from the 1998 baseline in the Primary Conservation Area (Figure A-7) will be analyzed and potential detrimental and positive impacts on grizzly bears will be documented through biological evaluation or assessment. Projects that change the number or capacity of developed sites must follow the Application Rules.

Application Rules for developed sites

Mitigation of detrimental impacts must occur within the affected subunit and be equivalent to the type and extent of impact. Mitigation measures must be in place before implementation of the project or included as an integral part of the completion of the project.

- New sites must be mitigated within that subunit to offset any increases in human capacity, habitat loss, and increased access to surrounding habitats. Consolidation and/or elimination of dispersed campsites is adequate mitigation for increases in human capacity at developed campgrounds if the new site capacity is equivalent to the dispersed camping eliminated.
- Administrative site expansions are exempt from human capacity mitigation expansion if such developments are necessary for enhancement of management of public lands and other viable alternatives are not available. Temporary construction work camps for highway construction or other major maintenance projects are exempt from human capacity mitigation if other viable alternatives are not available. Food storage facilities and management, including camp monitors, must be in place to ensure food storage compliance. All other factors resulting in potential detrimental impacts to grizzly bears must be mitigated as identified for other developed sites.
- To benefit the grizzly bear, capacity, season of use, and access to surrounding habitats of existing developed sites may be adjusted. The improvements may then be banked to mitigate equivalent impacts of future developed sites within that subunit.
- Minimize effects on grizzly habitat from activities based in statutory rights, such as the 1872 General Mining Law. Where the mitigated effects exceed the 1998 baseline within that subunit, provide mitigation to levels at or below the 1998 baseline in this order: 1) adjacent subunits, or 2) the nearest subunit, or 3) in areas outside the Primary Conservation Area adjacent to the subunit impacted. Mitigation for Mining Law site impacts must follow standard developed site mitigation to offset any increases in human capacity, habitat loss, and increased access to surrounding habitats.
- Honor existing oil and gas and other mineral leases. Proposed Applications for Permit to Drill and operating plans within those leases should meet the developed site standard. New leases, Applications for Permit to Drill, and operating plans must meet the developed site standard.
- Developments on private land are not counted against this standard.

Grizzly bear habitat conservation standard for livestock grazing

Inside the Primary Conservation Area, do not create new active commercial livestock grazing allotments, do not increase permitted sheep animal months from the 1998 baseline (Figure A-9), and phase out existing sheep allotments as opportunities arise with willing permittees.

Application Rule for livestock grazing standard

Allotments include both vacant and active commercial grazing allotments. Reissuance of permits for vacant cattle allotments may result in an increase in the number of permitted cattle, but the number of allotments must remain at or below the 1998 baseline. Allow combining or dividing existing allotments as long as acreage in allotments does not increase. Any such use of vacant cattle allotments resulting in an increase in permitted cattle numbers could be allowed only after an analysis to evaluate impacts on grizzly bears.

Grizzly bear habitat conservation guideline for livestock grazing

Inside the Primary Conservation Area, cattle allotments or portions of cattle allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, livestock allotments or portions of allotments with recurring conflicts that cannot be resolved through modification of grazing practices may be retired as opportunities arise with willing permittees.

Application Rule for livestock grazing guideline

Permittees with allotments with recurring conflicts will be given the opportunity to place livestock in a vacant allotment outside the Primary Conservation Area where there is less likelihood for conflicts with grizzly bears as these allotments become available.

Grizzly bear habitat conservation standard for nuisance bears

Coordinate with state wildlife management agencies to apply Conservation Strategy nuisance bear standards.

Grizzly bear habitat conservation standard for food storage

Inside the Primary Conservation Area, minimize grizzly bear/human conflicts using food storage, information and education, and other management tools.

Grizzly bear habitat conservation guideline for food storage

Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, emphasize proper sanitation techniques, including food storage orders, and information and education, while working with local governments and other agencies.

Grizzly bear habitat conservation guideline for winter motorized access

Inside the Primary Conservation Area, use localized area restrictions to address conflicts with winter use activities, where conflicts occur during denning or after bear emergence in the spring.

Grizzly bear habitat conservation guideline for food sources

Inside and outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, maintain the productivity, to the extent feasible, of the four key grizzly bear food sources as identified in the Conservation Strategy. Emphasize maintaining and restoring whitebark pine stands inside and outside the Primary Conservation Area.

Grizzly bear habitat conservation monitoring for secure habitat and motorized access

Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: secure habitat, open motorized access route density (OMARD) greater than one mile per square mile, and total motorized access route density (TMARD) greater than two miles per square mile in each subunit on the national forest. Outside the Primary Conservation Area in areas identified in state management plans as biologically suitable and socially acceptable for grizzly bear occupancy, monitor, and submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in secure habitat by national forest every two years.

Grizzly bear habitat conservation monitoring for developed sites

Inside the Primary Conservation Area, monitor, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in the number and capacity of developed sites on the national forest, and compare with the 1998 baseline.

Grizzly bear habitat conservation monitoring for livestock grazing

Inside the Primary Conservation Area, monitor, compare to the 1998 baseline, and annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: the number of commercial livestock grazing allotments on the national forest and the number of permitted domestic sheep animal months. Inside and outside the Primary Conservation Area, monitor and evaluate allotments for recurring conflicts with grizzly bears.

Grizzly bear habitat conservation monitoring for habitat effectiveness

Inside the Primary Conservation Area, monitor, and every five years submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: changes in seasonal habitat effectiveness in each Bear Management Unit and subunit on the national forest through the application of the Cumulative Effects Model or the best available system and compare outputs to the 1998 baseline. Annually review Cumulative Effects Model databases and update as needed. When funding is available, monitor representative non-motorized trails or access points where risk of grizzly bear mortality is highest.

Grizzly bear habitat conservation monitoring for whitebark pine

Monitor whitebark pine occurrence, productivity, and health inside and outside the Primary Conservation Area in cooperation with other agencies. Annually submit for inclusion in the Interagency Grizzly Bear Study Team Annual Report: results of whitebark pine cone production from transects or other appropriate methods, and results of other whitebark pine monitoring.

Amendment part 2—The 1998 baseline

The 1998 baseline values for habitat standards inside the Primary Conservation Area

The 1998 baseline represents an estimate of the habitat standards within the Primary Conservation Area as of 1998. That estimate relied on the best data available of what was known to be on the ground at the time. Baseline data establish a set of information against which future improvements and /or impacts can be assessed. As new information is available, the database will be adjusted and will serve as a tracking system for monitoring improvements and evaluating habitat conditions and the need for mitigation measures in the future. Any feature(s) not included in this 1998 baseline will be reviewed to determine its status in 1998. If the feature was present in 1998, it will be added to the baseline tables or maps, otherwise the feature will be subject to the standards and Application Rules identified in this amendment.

Secure habitat and motorized access route density within the Primary Conservation Area for each Bear Management Unit subunit

Using Geographic Information System databases created by each administrative unit, the percent secure habitat, OMARD greater than one mile per square mile, and TMARD greater than two miles per square mile were estimated as of 1998 for each Bear Management Unit subunit (Figure A-4). OMARD is evaluated for each of two seasons, as access routes may be restricted in one season and not another. TMARD and secure habitat are single values by definition and do not vary by season. The contribution of private roads and state and county highways was also evaluated for each Bear Management Unit subunit (Figure A-5). These values represent a minimum percent for OMARD and TMARD, and a maximum percent for secure habitat even if all motorized access features administered by the Forest Service were obliterated or decommissioned on National Forest System lands. A standardized program (AML) that runs in the ARC/INFO software environment was used to make the calculations. The buffer command in ARC/INFO is used to buffer all relevant motorized access features by 500 meters. The area outside of this buffer is secure habitat. Motorized access route density is calculated using a moving windows process with 30-meter cells and a one-mile square window.

Developed sites on public lands within the Primary Conservation Area

Developed sites include all sites on public land developed or improved for human use or resource development such as campgrounds, trailheads, lodges, administrative sites, service stations, summer homes, restaurants, visitor centers, and permitted resource development sites such as oil and gas exploratory wells, production wells, plans of operation for minerals activities, work camps, etc. Developed sites on public lands are currently inventoried in existing Geographic Information System databases and are an input item to the Cumulative Effects Model. Figure A-7 displays the number of developed sites for each administrative unit by Bear Management Unit subunit as of 1998.

Livestock grazing on public lands within the Primary Conservation Area

There were 100 commercial livestock grazing allotments inside the Primary Conservation Area in 1998 and 23,090 permitted sheep animal months (Figure A-9). Allotments with less than 100 acres inside the Primary Conservation Area were not included. Where several allotments are managed as one, this was counted as a single allotment. Sheep animal months are calculated by multiplying the permitted number of sheep times the months of permitted use. In many cases, actual use by sheep may have been less than the permitted numbers identified for 1998.

Habitat effectiveness

Habitat effectiveness outputs from the Cumulative Effects Model as of 1998 are presented in Figure A-10. Habitat effectiveness is a relative measure of that part of the energy potentially derived from the area that is available to bears given their response to humans. The higher the number the greater the habitat

effectiveness. The high values in the estrus period are associated with cutthroat trout spawning streams, high values in early hyperphagia are a result of moth aggregation sites, and high values in late hyperphagia are primarily due to whitebark pine. Habitat effectiveness is calculated using the ICE9 software, which evaluates information contained in several Geographic Information System and tabular databases. The databases include digital maps of vegetation, ungulate winter ranges, and point, linear and dispersed human activities; coefficient tables that categorize the relative values of vegetation and human activities; and tables that identify the type, intensity, and duration of the human activities.

Amendment part 3—Nuisance bear standards

Nuisance bear standards from the 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area[10]

The focus and intent of nuisance grizzly bear management inside and outside the Primary Conservation Area are predicated on strategies and actions to prevent grizzly bear/human conflicts. It is recognized that active management aimed at individual nuisance bears will be required in both areas (inside and outside the Primary Conservation Area). Management actions outside the Primary Conservation Area will be implemented according to state management plans in coordination with landowners and land management agencies. These actions will be compatible with grizzly bear population management objectives for each state for the areas outside the Primary Conservation Area.

General criteria

Location, cause of incident, severity of incident, history of bear, health/age/sex of bear, and the demographic characteristics of animals involved will all be considered in any relocation or removal. Removal of nuisance bears will be carefully considered and consistent with mortality limits for the Greater Yellowstone Area as described in the Conservation Strategy. Recognizing that conservation of female bears is essential to maintenance of a grizzly population, removal of nuisance females will be minimized.

Within the Primary Conservation Area

Within the Primary Conservation Area, management of nuisance bears will be addressed according to the following standards:

- Bears displaying food conditioning and/or habituation behaviors may be either relocated or removed based on specific details of the incident. State wildlife agencies, following consultation with other appropriate management authorities, and national parks will make this judgment after considering the cause, location, and severity of the incident or incidents.
- Bears may be relocated as many times as judged prudent by management authorities. No bear may be removed for any offense, other than unnatural aggression, without at least one relocation unless representatives of affected agencies document the reason in writing. All relocations outside the Primary Conservation Area will be governed by state management plans.
- Bears may be preemptively moved when they are in areas where they are likely to come into conflicts with site-specific human activities, but only as a last resort. Such preemptive moves will not count against the bear as nuisance moves.
- Bears preying on lawfully present livestock (cows, domestic sheep, horses, goats, llamas, etc.) on public lands will be managed according to the following criteria:
    - No grizzly bear involved in livestock depredations inside the Primary Conservation Area shall be removed unless it has been relocated at least one time and continues to cause livestock depredations. This does not apply to depredations occurring in sheep allotments inside the Primary Conservation Area in areas that were designated Management Situation 1[11] under the 1986 Interagency Grizzly Bear Guidelines.

[10] This section is included from the March 2003 Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area and is for reference only. The Conservation Strategy is subject to interagency review and updating. Readers should check for the most recent version of the document.

[11] Management Situation 1 areas are described in the Final Environmental Impact Statement.

  - Grizzly bears will not be removed or relocated from sheep allotments on federal land inside the Primary Conservation Area in areas that were designated Management Situation 1 under the 1986 Interagency Grizzly Bear Guidelines.
- Before any removal, except in cases of human safety, management authorities will consult by telephone or in person to judge the adequacy of the reason for removal.
- Bears displaying natural aggression are not to be removed, even if the aggression results in human injury or death, unless it is the judgment of management authorities that the particular circumstances warrant removal.
- Bears displaying unnatural aggression will be removed from the population.
- Decisions will be based on criteria for relocation and removal inside the Primary Conservation Area for management of nuisance bears in the Conservation Strategy and best biological judgment of authorities.
  - Authorized National Park Service authorities will implement removals and relocations within Yellowstone National Park and Grand Teton National Park.
  - Authorized state authorities outside Yellowstone National Park and Grand Teton National Park will implement other removals and relocations.
  - State wildlife agencies, in coordination with the appropriate federal agencies, will predetermine adequate and available sites for relocations. Relocation sites should be agreed upon before the need for relocation occurs. In order to deal with problem bears more efficiently, managers should have full access to relocation sites without having to conduct individual consultation for each relocation.
  - Livestock damage prevention and compensation are addressed in individual state management plans.
- Management of all nuisance bear situations will emphasize removal of the human cause of the conflict, when possible, or management and education actions to limit such conflicts. Relocation and removal of grizzly bears may occur if the above actions are not successful.

Specific criteria for removals

Captured grizzly bears identified for removal may be given to public research institutions or public zoological parks for appropriate non-release educational or scientific purposes as per regulations of states and national parks. Grizzly bears not suitable for release, research, or educational purposes will be removed as described in appropriate state management plans or in compliance with national park rules and regulations.

Outside of national parks, individual nuisance bears deemed appropriate for removal may be taken by a legal hunter in compliance with rules and regulations promulgated by the appropriate state wildlife agency commission, as long as such taking is in compliance with existing state and federal laws, and as long as mortality limits specified for the Greater Yellowstone Area as described in the Conservation Strategy are not exceeded. This could include licensed hunters or property owners or their agents who have obtained appropriate permits from the state. Licensed hunters will be allowed to possess bear parts for bears that are legally harvested under a state permit.

Monitoring protocol

All nuisance bear control actions, and grizzly bear/human and grizzly bear/livestock conflicts will be summarized annually in the Annual Report of the Interagency Grizzly Bear Study Team. This report will detail the cause and location of each conflict and management action and display an annual spatial distribution of conflicts that can be used by managers to identify where problems occur and to compare trends in locations, sources, land ownership, and types of conflicts.

Amendment part 4—Figures

Figure A-1. Criteria and definitions used in this amendment.

Criteria	Definition
Motorized access routes	Motorized access routes are all routes having motorized use or the potential for motorized use (restricted roads) including motorized trails, highways, and forest roads. Private roads and state and county highways are counted.
Restricted road	A restricted road is a road on which motorized vehicle use is restricted seasonally or yearlong. The road requires effective physical obstruction, generally gated.
Permanently restricted road	A permanently restricted road is a road restricted with a permanent barrier and not a gate. A permanently restricted road is acceptable within secure habitat.
Decommissioned or obliterated or reclaimed road	A decommissioned or obliterated or reclaimed road refers to a route which is managed with the long-term intent for no motorized use, and has been treated in such a manner to no longer function as a road. An effective means to accomplish this is through one or a combination of several means including recontouring to original slope, placement of logging or forest debris, planting of shrubs or trees, etc.
Secure habitat	Secure habitat is more than 500 meters from an open or gated motorized access route or recurring helicopter flight line. Secure habitat must be greater than or equal to 10 acres in size[12]. Large lakes (greater than one square mile) are not included in the calculations.
Project	A project is an activity requiring construction of new roads, reconstructing or opening a permanently restricted road, or recurring helicopter flights at low elevations. Opening a gated road for public or administrative use is not considered a project as the area behind locked, gated roads is not considered secure habitat.
Temporary project	To qualify as a temporary project under the Application Rules, project implementation will last no longer than three years.
Opening a permanently restricted road	Removing permanent barriers such that the road is accessible to motorized vehicles.
Permanent barrier	A permanent barrier refers to such features as earthen berms or ripped road surfaces to create a permanent closure.
Removing motorized routes	To result in an increase in secure habitat, motorized routes must either be decommissioned or restricted with permanent barriers, not gates. Non-motorized use is permissible.
Seasonal periods	Season 1 – March 1 through July 15 Season 2 – July 16 through November 30 Project activities occurring between December 1 and February 28 do not count against secure habitat.
Developed site	A developed site includes but is not limited to sites on public land developed or improved for human use or resource development such as campgrounds, trailheads, improved parking areas, lodges (permitted resorts), administrative sites, service stations, summer homes (permitted recreation residences), restaurants, visitor centers, and permitted resource development sites such as oil and gas exploratory wells, production wells, plans of operation for mining activities, work camps, etc.
Vacant allotments	Vacant allotments are livestock grazing allotments without an active permit, but could be restocked or used periodically by other permittees at the discretion of the land management agency to resolve resource issues or other concerns.
Recurring conflicts	Recurring grizzly bear/human or grizzly bear/livestock conflicts are defined as three or more years of recorded conflicts during the most recent five-year period.

[12] Secure habitat in this amendment does not include areas open to cross country off-highway vehicle (OHV) travel.

Figure A-2. Bear Management Units and subunits inside the Primary Conservation Area.

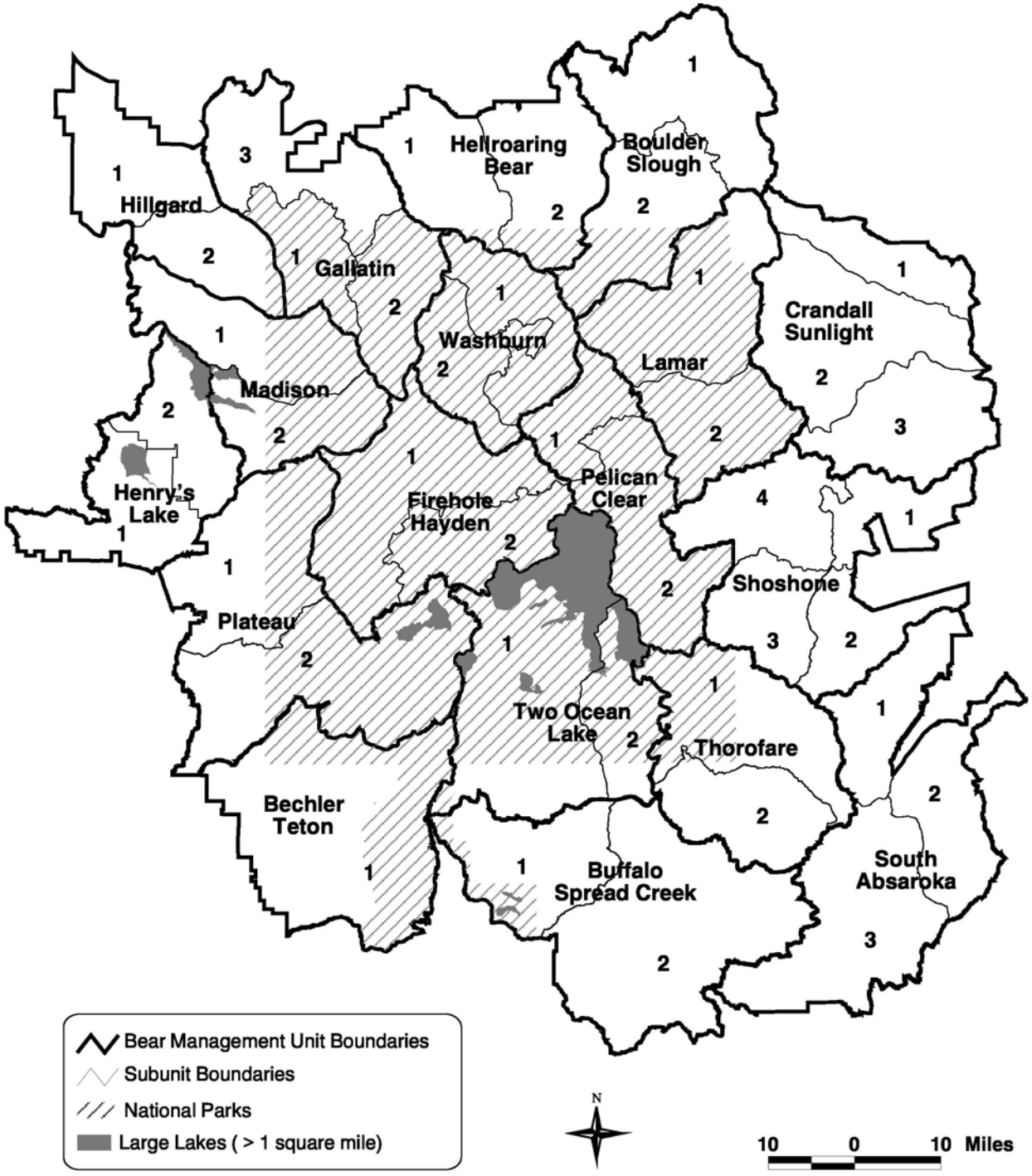


Figure A-3. General Bear Management Unit (BMU) subunit information (thousands of acres) inside the Primary Conservation Area.

Subunit name	BMU #	Acres	Land management agencies
Bechler/Teton	18	341.8	Caribou-Targhee NF, Yellowstone NP, Grand Teton NP
Boulder/Slough #1	4	180.5	Custer NF, Gallatin NF
Boulder/Slough #2	4	148.5	Custer NF, Gallatin NF, Yellowstone NP
Buffalo/Spread Creek #1	17	142.1	Bridger-Teton NF, Grand Teton NP
Buffalo/Spread Creek #2	17	325.1	Bridger-Teton NF
Crandall/Sunlight #1	6	83.2	Gallatin NF, Shoshone NF
Crandall/Sunlight #2	6	202.2	Gallatin NF, Shoshone NF
Crandall/Sunlight #3	6	142.1	Shoshone NF
Firehole/Hayden #1	10	217.0	Yellowstone NP
Firehole/Hayden #2	10	113.3	Yellowstone NP
Gallatin #1	2	81.9	Yellowstone NP
Gallatin #2	2	99.2	Yellowstone NP
Gallatin #3	2	139.5	Gallatin NF
Hellroaring/Bear #1	3	118.4	Gallatin NF, Yellowstone NP
Hellroaring/Bear #2	3	146.6	Gallatin NF, Yellowstone NP
Henrys Lake #1	12	128.6	Caribou-Targhee NF
Henrys Lake #2	12	97.9	Caribou-Targhee NF, Gallatin NF
Hilgard #1	1	128.6	Beaverhead-Deerlodge NF, Gallatin NF
Hilgard #2	1	90.2	Beaverhead-Deerlodge NF, Gallatin NF
Lamar #1	5	192.0	Yellowstone NP
Lamar #2	5	115.8	Yellowstone NP
Madison #1	11	145.3	Beaverhead-Deerlodge NF, Gallatin NF
Madison #2	11	100.5	Gallatin NF
Pelican/Clear #1	8	69.1	Yellowstone NP

Subunit name	BMU #	Acres	Land management agencies
Pelican/Clear #2	8	164.5	Yellowstone NP
Plateau #1	13	183.0	Caribou-Targhee NF, Gallatin NF, Yellowstone NP
Plateau #2	13	268.8	Caribou-Targhee NF, Yellowstone NP
Shoshone #1	7	78.1	Shoshone NF
Shoshone #2	7	84.5	Shoshone NF
Shoshone #3	7	90.2	Shoshone NF
Shoshone #4	7	121.0	Shoshone NF
South Absaroka #1	16	104.3	Shoshone NF
South Absaroka #2	16	122.2	Shoshone NF
South Absaroka #3	16	222.7	Shoshone NF
Thorofare #1	15	175.4	Bridger-Teton NF, Yellowstone NP
Thorofare #2	15	115.2	Bridger-Teton NF, Yellowstone NP
Two Ocean/Lake #1	14	310.4	Bridger-Teton NF, Yellowstone NP
Two Ocean/Lake #2	14	91.5	Bridger-Teton NF, Yellowstone NP
Washburn #1	9	113.9	Yellowstone NP
Washburn #2	9	92.2	Yellowstone NP

Figure A-4. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile, and TMARD >2 miles per square mile for 40 Bear Management Unit (BMU) subunits in the Greater Yellowstone Area. Includes Forest Service, Bureau of Land Management, state, county, and private motorized access routes. Size is shown in thousands of acres[1].

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat	Size
		S1	S2			
Bechler/Teton	18	12.7	12.7	4.7	78.1	341.8
Boulder/Slough #1	4	2.2	2.2	0.1	96.6	180.5
Boulder/Slough #2	4	1.0	1.0	0	97.7	148.5
Buffalo/Spread Creek #1	17	10.1	10.2	4.1	88.3	142.1 (140.8)
Buffalo/Spread Creek #2	17	13.3	14.5	10.4	74.3	325.1
Crandall/Sunlight #1	6	11.9	16.2	4.0	81.1	83.2
Crandall/Sunlight #2	6	13.6	14.6	8.9	82.3	202.2
Crandall/Sunlight #3	6	12.8	16.6	8.2	80.4	142.1
Firehole/Hayden #1	10	6.3	6.3	1.2	88.4	217.0
Firehole/Hayden #2	10	6.3	6.3	0.9	88.4	113.3
Gallatin #1	2	1.6	1.6	0.1	96.3	81.9
Gallatin #2	2	7.8	7.8	3.8	90.2	99.2
Gallatin #3	2	41.5	42.5	16.9	55.3	139.5
Hellroaring/Bear #1	3	20.8	21.5	13.5	77.0	118.4
Hellroaring/Bear #2	3	0.6	0.6	0.2	99.5	146.6
Henrys Lake #1	12	44.7	44.7	25.9	45.4	128.6 (122.2)

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat	Size
		S1	S2			
Henrys Lake #2	12	46.1	46.1	28.1	45.7	97.9 (89.6)
Hilgard #1	1	25.1	25.1	12.5	69.8	128.6
Hilgard #2	1	16.0	16.0	10.3	71.5	90.2
Lamar #1	5	7.0	7.0	3.3	89.4	192.0
Lamar #2	5	0	0	0	100	115.8
Madison #1	11	24.2	24.5	10.2	71.5	145.3
Madison #2	11	31.7	31.7	22.3	66.5	100.5 (95.4)
Pelican/Clear #1	8	1.3	1.3	0.4	97.8	69.1
Pelican/Clear #2	8	3.0	3.0	0.2	94.1	164.5
Plateau #1	13	19.0	19.2	9.8	68.9	183.0
Plateau #2	13	6.1	6.1	2.4	88.7	268.8
Shoshone #1	7	1.5	1.5	0.9	98.5	78.1
Shoshone #2	7	1.1	1.1	0.4	98.8	84.5
Shoshone #3	7	3.4	3.4	1.3	97.0	90.2
Shoshone #4	7	3.9	4.6	2.0	94.9	121.0
South Absaroka #1	16	0.4	0.4	0	99.2	104.3
South Absaroka #2	16	0	0	0	99.9	122.2
South Absaroka #3	16	2.1	2.1	2.3	96.8	222.7

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat	Size
		S1	S2			
Thorofare #1	15	0	0	0	100	175.4
Thorofare #2	15	0	0	0	100	115.2
Two Ocean/Lake #1	14	1.8	1.8	0.1	96.3	310.4 (238.1)
Two Ocean/Lake #2	14	0	0	0	100	91.5 (80.0)
Washburn #1	9	12.4	12.4	2.9	83.0	113.9
Washburn#2	9	3.6	3.6	0.7	92.0	92.2
Mean for PCA/total acres		10.4	10.7	5.3	85.6	5,893.8 (5,782.4)

[1] Lakes >1 mile in size were removed from subunit totals, OMARD, TMARD, and secure habitat calculations. Numbers in parentheses are acres of subunit without these lakes.

Figure A-5. The 1998 baseline values for secure habitat, OMARD >1 mile per square mile, and TMARD >2 miles per square mile for 40 Bear Management Unit (BMU) subunits in the Greater Yellowstone Area. Includes only private roads and state and county highways[2]. Size is shown in thousands of acres[1,2].

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat[2]	Size
		S1	S2			
Bechler/Teton	18	0	0	0	99	341.8
Boulder/Slough #1	4	2	2	0	97	180.5
Boulder/Slough #2	4	0	0	0	100	148.5
Buffalo/Spread Creek #1	17	0	0	0	99	142.1 (140.8)
Buffalo/Spread Creek #2	17	2	2	0	95	325.1
Crandall/Sunlight #1	6	6	6	1	92	83.2
Crandall/Sunlight #2	6	8	8	1	89	202.2
Crandall/Sunlight #3	6	5	5	1	93	142.1
Firehole/Hayden #1	10	0	0	0	100	217.0
Firehole/Hayden #2	10	0	0	0	100	113.3
Gallatin #1	2	0	0	0	99	81.9
Gallatin #2	2	1	1	0	99	99.2
Gallatin #3	2	16	16	8	81	139.5
Hellroaring/Bear #1	3	9	9	4	91	118.4
Hellroaring/Bear #2	3	0	0	0	100	146.6
Henrys Lake #1	12	31	31	16	67	128.6 (122.2)

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat[2]	Size
		S1	S2			
Henrys Lake #2	12	14	14	7	85	97.9 (89.6)
Hilgard #1	1	6	6	2	91	128.6
Hilgard #2	1	2	2	3	92	90.2
Lamar #1	5	2	2	1	97	192.0
Lamar #2	5	0	0	0	100	115.8
Madison #1	11	6	6	3	94	145.3
Madison #2	11	8	8	4	90	100.5 (95.4)
Pelican/Clear #1	8	0	0	0	100	69.1
Pelican/Clear #2	8	0	0	0	100	164.5
Plateau #1	13	2	2	1	95	183.0
Plateau #2	13	0	0	0	99	268.8
Shoshone #1	7	1	1	0	99	78.1
Shoshone #2	7	0	0	0	99	84.5
Shoshone #3	7	1	1	0	98	90.2
Shoshone #4	7	1	1	0	96	121.0
South Absaroka #1	16	0	0	0	99	104.3
South Absaroka #2	16	0	0	0	100	122.2
South Absaroka #3	16	0	0	0	100	222.7

Subunit name	BMU #	OMARD % > 1 mi/sq mi		TMARD % >2 mi/sq mi	% secure habitat[2]	Size
		S1	S2			
Thorofare #1	15	0	0	0	100	175.4
Thorofare #2	15	0	0	0	100	115.2
Two Ocean/Lake #1	14	0	0	0	100	310.4 (238.1)
Two Ocean/Lake #2	14	0	0	0	100	91.5 (80.0)
Washburn #1	9	0	0	0	100	113.9
Washburn#2	9	0	0	0	100	92.2
Mean for PCA/total acres		3	3	1.3	96	5,893.8 (5,782.4)

[1] Lakes >1 square mile in size were removed from subunit totals, OMARD, TMARD, and secure habitat calculations. Numbers in parentheses are acres of subunit without these lakes.

[2] These motorized features are not subject to Forest Service management. The values in this table represent a minimum percent for OMARD and TMARD, and a maximum percent for secure habitat even if all motorized access features administered by the Forest Service were obliterated or decommissioned on public lands.

Figure A-6. Acres (in thousands) and national forest/national park overlap when applying the 1 percent rule[1].

BMU #	Largest BMU subunit	1% rule acres[2]	National forest(s) within the BMU	National parks within the BMU
18	Bechler/Teton #1	3.4	Targhee	Yellowstone, Grand Teton
4	Boulder/Slough #1	1.8	Custer, Gallatin	Yellowstone
17	Buffalo/Spread Creek #2	3.3	Bridger-Teton	Grand Teton
6	Crandall/Sunlight #2	2.0	Gallatin, Shoshone	
10	Firehole/Hayden #1	2.2		Yellowstone
2	Gallatin #3	1.4	Gallatin	Yellowstone
3	Hellroaring/Bear #2	1.5	Gallatin	Yellowstone
12	Henrys Lake #1	1.2	Gallatin, Targhee	
1	Hilgard #1	1.3	Beaverhead, Gallatin	Yellowstone
5	Lamar #1	1.9	Custer, Gallatin	Yellowstone
11	Madison #1	1.5	Gallatin	Yellowstone
8	Pelican/Clear #2	1.6		Yellowstone
13	Plateau #2	2.7	Gallatin, Targhee	Yellowstone
7	Shoshone #4	1.2	Shoshone	
16	South Absaroka #3	2.2	Shoshone	
15	Thorofare #1	1.2	Bridger-Teton	Yellowstone
14	Two Ocean/Lake #1	2.4	Bridger-Teton	Yellowstone, Grand Teton
9	Washburn #1	1.1		Yellowstone
PCA	Total 1% rule acres	34.4		
	Total 1% rule acres—BMUs with national parks only	4.9		
	Total 1% rule acres—BMUs with national forests only	6.6		
	Total 1% rule acres—BMUs with national forests plus national parks	22.9		

[1] The 1 percent rule is based on the size of the largest BMU subunit. When BMU boundaries include more than one national forest and/or national park, administrative units will need to coordinate to ensure the 1 percent rule is not exceeded.
[2] Large lakes not included in 1 percent rule acre calculations.

Figure A-7. The 1998 baseline for numbers of developed sites on public lands within each of the Bear Management Unit subunits in the Greater Yellowstone Area.

Subunit	Administrative units	Permitted summer home complexes[1]	Developed campgrounds[2]	Trailheads	Major developed sites and lodges	Administrative or maintenance sites	Other developed sites[3]	Plans of operation for minerals activities[4]
Bechler/Teton	Targhee NF Yellowstone NP Grand Teton NP	0 0 0	1 0 8	5 2 3	2 0 1	4 2 3	17 2 10	0 0 0
Boulder/Slough #1	Custer NF Gallatin NF	0 0	0 1	1 7	0 0	0 1	0 3	6 2
Boulder/Slough #2	Gallatin NF Yellowstone NP	0 0	0 1	0 3	0 0	2 2	0 1	0 0
Buffalo/Spread Creek #1	Bridger-Teton NF Grand Teton NP	0 0	1 0	1 7	0 2	0 2	1 3	0 0
Buffalo/Spread Creek #2	Bridger-Teton NF	1	4	3	3	4	5	2
Crandall/Sunlight #1	Shoshone NF Gallatin NF	0 0	2 1	5 2	1 0	1 0	5 5	0 0
Crandall/Sunlight #2	Shoshone NF Gallatin NF	0 0	5 1	4 0	1 0	2 0	5 0	1 0
Crandall/Sunlight #3	Shoshone NF Wyoming Game and Fish	0 0	2 2	3 0	0 0	1 1	2 0	0 0
Firehole/Hayden #1	Yellowstone NP	0	1	5	1	6	13	0
Firehole/Hayden #2	Yellowstone NP	0	1	3	1	2	8	0
Gallatin #1	Yellowstone NP	0	0	3	0	1	0	0
Gallatin #2	Yellowstone NP	0	2	5	1	12	1	0
Gallatin #3	Gallatin NF Yellowstone NP	0 0	2 0	10 0	0 0	0 0	7 0	0 0

Subunit	Administrative units	Permitted summer home complexes[1]	Developed campgrounds[2]	Trailheads	Major developed sites and lodges	Administrative or maintenance sites	Other developed sites[3]	Plans of operation for minerals activities[4]
Hellroaring/Bear #1	Gallatin NF Yellowstone NP	0 0	5 0	12 1	1 0	1 0	5 1	8[5] 0
Hellroaring/Bear #2	Gallatin NF Yellowstone NP	0 0	0 0	1 0	0 0	1 2	0 0	0 0
Henrys Lake #1	Targhee NF	2	3	1	0	3	10	1
Henrys Lake #2	Targhee NF Gallatin NF	0 6	0 3	1 4	0 0	1 0	1 2	1 0
Hilgard #1	Beaverhead NF Gallatin NF	0 0	0 0	0 6	0 1	3 2	0 2	0 0
Hilgard #2	Gallatin NF Yellowstone NP	0 0	0 0	4 3	0 0	1 0	1 0	0 0
Lamar #1	Yellowstone NP Gallatin NF Shoshone NF Custer NF	0 0 0 0	1 2 0 0	5 5 0 1	0 0 0 0	3 6 0 0	2 4 0 0	0 6 0 2
Lamar #2	Yellowstone NP	0	0	0	0	4	0	0
Madison #1	Gallatin NF Yellowstone NP	0 0	1 0	11 0	0 0	1 0	9 0	0 0
Madison #2	Gallatin NF Yellowstone NP	8 0	2 0	1 1	1 0	6 2	6 1	0 0
Pelican/Clear #1	Yellowstone NP	0	0	2	0	0	0	0
Pelican/Clear #2	Yellowstone NP	0	1	4	1	4	3	0
Plateau #1	Targhee NF Gallatin NF Yellowstone NP	1 0 0	0 0 0	0 1 0	0 0 0	0 0 1	1 0 0	0 0 0
Plateau #2	Targhee NF Yellowstone NP	0 0	1 0	1 0	0 0	1 4	1 0	0 0
Shoshone #1	Shoshone NF	1	2	0	0	0	6	0

Subunit	Administrative units	Permitted summer home complexes[1]	Developed campgrounds[2]	Trailheads	Major developed sites and lodges	Administrative or maintenance sites	Other developed sites[3]	Plans of operation for minerals activities[4]
Shoshone #2	Shoshone NF	0	0	1	1	0	0	0
Shoshone #3	Shoshone NF	2	0	1	1	0	0	0
Shoshone #4	Shoshone NF	3	3	3	6	0	8	0
South Absaroka #1	Shoshone NF	0	0	0	0	0	0	0
South Absaroka #2	Shoshone NF	0	0	0	0	2	0	0
South Absaroka #3	Shoshone NF	1	3	4	1	1	4	0
Thorofare #1	Bridger-Teton NF Yellowstone NP	0 0	0 0	0 0	0 0	0 4	0 0	0 0
Thorofare #2	Bridger-Teton NF Yellowstone NP	0 0	0 0	0 0	0 0	2 0	0 0	0 0
Two Ocean/Lake #1	Yellowstone NP Bridger-Teton NF Grand Teton NP	0 0 0	2 1 0	3 0 1	1 0 0	3 0 0	2 0 1	0 0 0
Two Ocean/Lake #2	Yellowstone NP Bridger-Teton NF	0 0	0 0	0 0	0 0	2 1	0 0	0 0
Washburn #1	Yellowstone NP	0	2	8	2	7	6	0
Washburn #2	Yellowstone NP	0	1	6	0	1	4	0
Primary Conservation Area	All	25	68	164	29	115	168	29

[1] Single permitted recreation residences are classified as other developed sites in this table.
[2] Four trailheads on the Bridger-Teton National Forest are combined with the associated campgrounds and are considered a single developed site.
[3] Includes community infrastructure sites and other miscellaneous facilities.
[4] Mining claims with plans of operation are considered developed sites for this baseline. Currently, not all sites have active projects.
[5] Includes one mineral materials site with an outside contractor.

Figure A-8. Number of mining claims as of 1998 in Bear Management Unit subunits in the Primary Conservation Area[1].

Subunit	Gallatin NF	Custer NF	Caribou-Targhee NF	Shoshone NF	Bridger-Teton NF
Boulder/Slough #1	8	144	---	---	---
Buffalo/Spread Creek #1	---	---	---	---	14
Buffalo/Spread Creek #2	---	---	---	---	6
Hellroaring/Bear #1	653	---	---	---	---
Henrys Lake #1	---	---	5	---	---
Henrys Lake #2	---	---	3	---	---
Lamar #1	429	42	---	---	---
Shoshone #3	---	---	---	16	---
South Absaroka #2	---	---	---	28	---
South Absaroka #3	---	---	---	6	---
Total	1,090	186	8	50	20

[1] Activities based in statutory rights, such as oil and gas leases and mining claims under the 1872 General Mining Law are also tracked as part of the developed site monitoring effort. Mining claims and or oil and gas leases do not in and of themselves constitute a site development, but have the potential to be developed sometime in the future. There were no oil and gas leases inside the Primary Conservation Area as of 1998, and 1,354 mining claims in ten subunits inside the Primary Conservation Area. It is important to note that one mining claim does not necessarily mean a potential for one operating plan. Claims are often staked around known mineral deposits to protect the original claim, and operating plans can sometimes encompass hundreds of claims. In addition, there are always a number of claims filed that, after detailed exploration, do not prove to have enough mineralization to be economically developed. Claims or claim groups with approved operating plans are included in the developed site baseline (Figure A-7).

Figure A-9. Number of commercial livestock grazing allotments and sheep animal months (AMs) inside the Primary Conservation Area in 1998.

Administrative unit	Cattle allotments		Sheep allotments		Sheep AMs[1]
	Active[2]	Vacant[3]	Active[1]	Vacant[3]	
Beaverhead-Deerlodge NF	2	3	0	0	0
Bridger-Teton NF	9	0	0	0	0
Caribou-Targhee NF	9	1	7	4	14,163
Custer NF	0	0	0	0	0
Gallatin NF	24	9	2	3	3,540
Shoshone NF	24	0	2	0	5,387
Grand Teton NP	1	0	0	0	0
Total in PCA	69	13	11	7	23,090

[1]Since 1998, five of the seven active sheep allotments on the Caribou-Targhee National Forest and the two active sheep allotments on the Shoshone National Forest within the Primary Conservation Area have been closed. As of 2004, there are only four active sheep allotments in side the Primary Conservation Area, totaling 7,130 AMs.

[2] One of the active cattle allotments on the Bridger-Teton National Forest was closed in late 2003.

[3]Vacant allotments are those without an active permit but could used periodically by other permittees at the discretion of the land management agency to resolve resource issues or other concerns.

Figure A-10. 1998 Habitat effectiveness (HE) values by season from the Yellowstone grizzly bear Cumulative Effects Model for each of 40 Greater Yellowstone Area grizzly Bear Management Unit subunits[1].

Subunit	Spring (March 1 - May 15) HE	Estrus (May 16 - July 15) HE	Early hyperphagia (July 16 - August 31) HE	Late hyperphagia (September 1 - November 30) HE
Bechler/Teton#1	116	64	44	274
Boulder/Slough#1	105	105	119	853
Boulder/Slough#2	123	112	111	521
Buffalo/Spread Cr#1	79	86	78	267
Buffalo/Spread Cr#2	58	98	125	863
Crandall/Sunlight#1	53	94	78	800
Crandall/Sunlight#2	52	82	124	329
Crandall/Sunlight#3	53	50	156	208
Firehole/Hayden#1	96	189	162	244
Firehole/Hayden#2	45	843	66	342
Gallatin#1	139	144	198	635
Gallatin#2	104	97	105	585
Gallatin#3	78	69	89	599
Hellroaring/Bear#1	85	74	95	678
Hellroaring/Bear#2	117	99	98	628

Subunit	Spring (March 1 - May 15) HE	Estrus (May 16 - July 15) HE	Early hyperphagia (July 16 - August 31) HE	Late hyperphagia (September 1 - November 30) HE
Henrys Lake#1	41	39	32	178
Henrys Lake#2	41	41	33	225
Hilgard#1	99	68	91	614
Hilgard#2	81	97	132	902
Lamar#1	127	118	136	571
Lamar#2	132	167	180	795
Madison#1	53	115	227	390
Madison#2	41	60	147	63
Pelican/Clear#1	103	324	105	560
Pelican/Clear#2	105	2253	203	997
Plateau#1	26	49	36	109
Plateau#2	75	81	56	442
Shoshone#1	39	50	115	264
Shoshone#2	51	56	1424	387
Shoshone#3	65	57	583	484
Shoshone#4	57	78	327	392

Subunit	Spring (March 1 - May 15) HE	Estrus (May 16 - July 15) HE	Early hyperphagia (July 16 - August 31) HE	Late hyperphagia (September 1 - November 30) HE
South Absaroka#1	55	57	392	399
South Absaroka#2	41	45	339	250
South Absaroka#3	46	73	303	551
Thorofare #1	84	488	298	956
Thorofare #2	79	82	295	583
Two Ocean/Lake#1	115	1300	64	426
Two Ocean/Lake#2	117	2401	107	1079
Washburn#1	121	110	126	404
Washburn#2	99	86	85	272

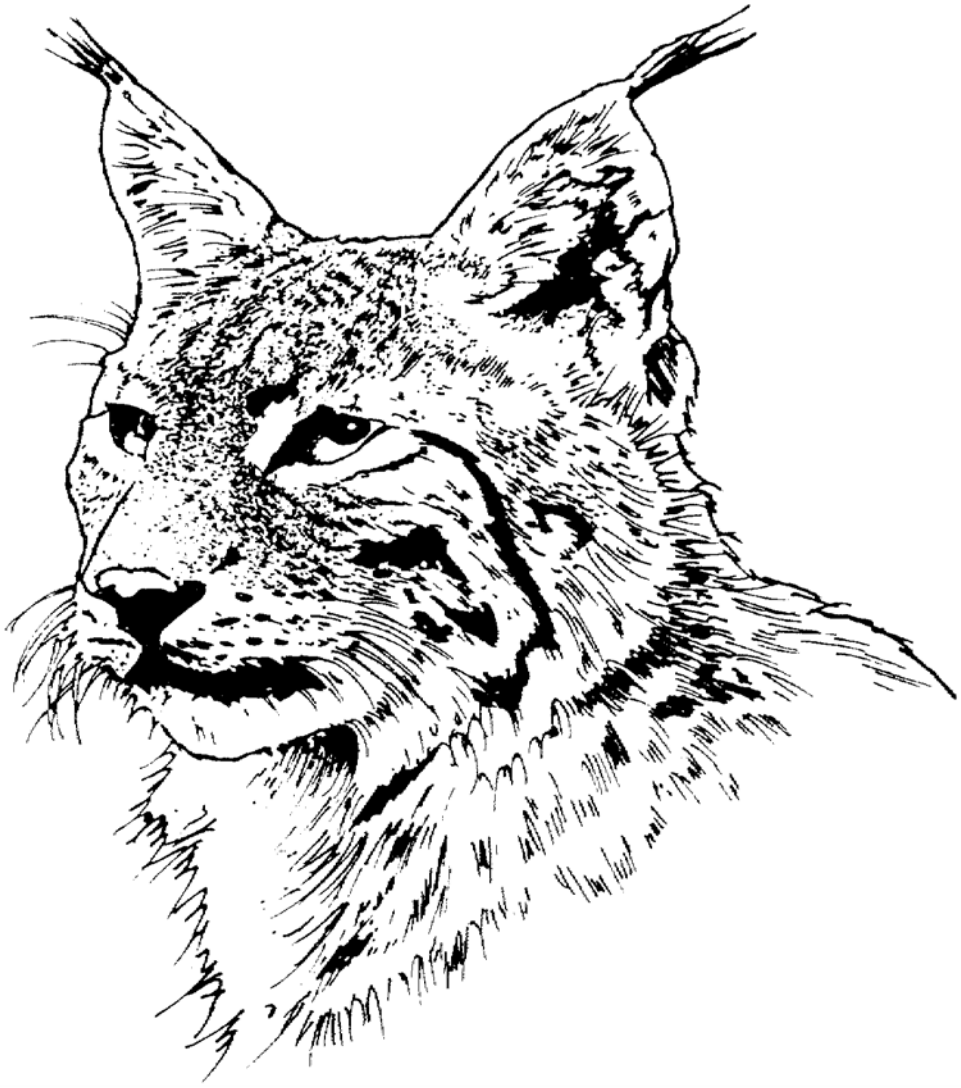
[1] Weaver et al. 1986, Bevins 1997, Dixon 1997. HE values are based on productivity coefficients depicting an average year (Mattson et al. 2004). The higher the number the greater the HE.

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March 2007

Northern Rockies Lynx Management Direction Record of Decision



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Record of Decision

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Attachment 1 – Northern Rockies Lynx Management Direction

Summary of the decision

We have selected Alternative F, Scenario 2 as described in the Northern Rockies Lynx Management Direction Final Environmental Impact Statement (FEIS) (pp. 35 to 40), with modifications. We modified Alternative F, Scenario 2 and incorporated the U.S. Fish and Wildlife Service (FWS) Terms and Conditions (USDI FWS 2007), where applicable, into the management direction – see Attachment 1- hereafter called the *selected alternative*. We determined the selected alternative provides direction that contributes to conservation and recovery of Canada lynx in the Northern Rockies ecosystem, meets the Purpose and Need, responds to public concerns, and is consistent with applicable laws and policies. In the FEIS we analyzed six alternatives in detail and two scenarios for Alternative F. Of those, we determined Alternative F Scenario 2 is the best choice. With this decision, we are incorporating the goal, objectives, standards, and guidelines of the selected alternative into the existing plans of all National Forests in the Northern Rockies Lynx Planning Area – see Figure 1-1, FEIS, Vol. 1 Tables 1-1 and 1-2.

The direction applies to mapped lynx habitat on National Forest System land presently **occupied** by Canada lynx, as defined by the *Amended Lynx Conservation Agreement between the Forest Service and the FWS* (USDA FS and USDI FWS 2006). When National Forests are designing management actions in **unoccupied** mapped lynx habitat they should consider the lynx direction, especially the direction regarding linkage habitat. If and when those National Forest System lands become occupied, based upon criteria and evidence described in the Conservation Agreement, the direction shall then be applied to those forests. If a conflict exists between this management direction and an existing plan, the more restrictive direction will apply.

The detailed rationale for our decision, found further in this document, explains how the selected alternative best meets our decision criteria. Those decision criteria are: 1) meeting the Purpose and Need to provide management direction that conserves and promotes the recovery of Canada lynx while preserving the overall multiple use direction in existing plans; 2) responding to the issues; and 3) responding to public concerns.

Background

The FWS listed Canada lynx as a threatened species in March 2000, saying the main threat was "the lack of guidance for conservation of lynx and snowshoe hare habitat in National Forest Land and Resource Plans and BLM Land Use Plans" (USDI FWS 2000a). Following the listing, the Forest Service (FS) signed a Lynx Conservation Agreement with the FWS in 2001 to consider the Lynx Conservation Assessment and Strategy (LCAS) during project analysis, and the FS agreed to not proceed with projects that would be "likely to adversely affect" lynx until the plans were amended. The Conservation Agreement (CA) was renewed in 2005 and added the concept of occupied mapped lynx habitat. In 2006 the CA was amended to define occupied habitat and to

list those National Forests that were occupied. In 2006 it was also extended for 5 years (until 2011), or until all relevant forest plans were revised to provide guidance necessary to conserve lynx (USDA FS and USDI FWS 2000, 2005, 2006a, 2006b). The plan direction in this decision fulfills our agreement to amend the plans. The management direction provided in this decision is based upon the science and recommendations in:

- *Ecology and Conservation of Lynx in the United States* (Ruggiero et al 2000), which summarizes lynx ecology;
- *Lynx Conservation Assessment and Strategy* (LCAS) (Ruediger et al 2000), which recommends conservation measures for activities that could place lynx at risk by altering their habitat or reducing their prey; and
- Numerous publications cited in the FEIS and found listed in the *References* section of this ROD and in the FEIS, pp. 381 to 396.

Purpose of and Need for action

The Purpose and Need is to incorporate management direction in land management plans that conserves and promotes recovery of Canada lynx, by reducing or eliminating adverse effects from land management activities on National Forest System lands, while preserving the overall multiple-use direction in existing plans (FEIS, Vol. p. 1).

Risks to lynx and lynx habitat

The overall goals of the LCAS were to recommend lynx conservation measures, provide a basis for reviewing the adequacy of Forest Service land and resource management plans with regard to lynx conservation, and to facilitate section 7 conferencing and consultation under ESA. The LCAS identified a variety of possible risks to lynx and lynx habitat.

The LCAS identified *risk factors affecting lynx productivity* (pp. 2-2 to 2-15) as:

- Timber management
- Wildland fire management
- Livestock grazing
- Recreational uses
- Forest backcountry roads and trails
- Other human developments

These are the typical types of activities conducted on federal land administered by the FS, and the FS has the authority to manage and regulate them. As such, the management direction analyzed in the Lynx FEIS and incorporated into the forest plans with this Record of Decision (ROD) focus on these types of activities.

The LCAS identified *risk factors affecting mortality* (pp. 2-15 to 2-17) as:

- Trapping
- Shooting
- Predator control
- Highways
- Predation by other species

These factors can directly cause lynx deaths. Trapping of lynx is no longer permitted in the planning area, although incidental trapping of lynx could still occur. Incidental or illegal shooting can also occur, but trapping and hunting is regulated by state agencies. Predator control activities are conducted by USDA Wildlife Services. Since the factors of trapping shooting and predator control are outside the authority of the FS to manage or regulate, this ROD does not include management direction related to them.

Highways (generally high-speed, two lane) are a known source of direct mortality (LCAS, pp. 2-16 to 2-17). Depending on the situation, this risk factor may fall under the authority of the FS. Therefore, it is addressed in the FEIS, and management direction concerning highways is incorporated into the Forest Plans through this ROD.

Other predators may affect lynx. Lynx have a competitive advantage in places where deep, soft snow tends to exclude predators in mid-winter, the time when prey is most limiting. Certain activities, such as certain types of winter recreation, may provide access to other predators (LCAS, pp. 2-6 to 2-15). The FEIS and ROD addresses this concern.

The LCAS identified *risk factors affecting movement* (pp. 2-17 to 2-19) as:

- Highways and associated development
- Private land development

Lynx are known to disperse over wide areas. Highways and the developments associated with them may affect lynx movement (LCAS, p. 2-17). The FS has only limited authority to address highways, and has no authority to manage activities on private land. Based on the limited authority the FS has in this area, only a few guidelines address these risk factors.

After the LCAS was issued the FWS published a Clarification of Findings in the *Federal Register* (FEIS, Vol. 1, Appendix P), commonly referred to as the Remand Notice. In the Remand Notice the FWS states, "We found no evidence that some activities, such as forest roads, pose a threat to lynx. Some of the activities suggested, such as mining and grazing, were not specifically addressed [in the Remand Notice] because we have no information to indicate they pose threats to lynx" (p. 40083). Further on in the Remand Notice they state, "Because no evidence has been provided that packed snowtrails facilitate competition to a level that negatively affects lynx, we do not consider packed snowtrails to be a threat to lynx at this time" (p. 40098). In regards to timber harvest the FWS states, "Timber harvesting can be beneficial, benign, or detrimental to lynx depending on harvest methods, spatial and temporal specifications, and the inherent vegetation potential of the site. Forest practices in lynx habitat that result in or retain a dense understory provide good snowshoe hare habitat that in turn provides good foraging habitat for lynx" (p. 40083). These findings by FWS narrow the focus from the concerns first published in the LCAS (discussed above) about what management direction is needed to maintain or improve Canada lynx habitat. We considered this information in the development of the selected alternative, and in our decision.

Public involvement

We involved the public in the development of the plan direction from the very beginning. In order to determine the scope of the public's interest in developing lynx direction the FS and BLM started with a notice published in the *Federal Register* (Vol. 66, No. 176, pp. 47160 to 47163) on September 11, 2001. Originally, the scoping period was scheduled to end on October 26, 2001, but we extended it to December 10, 2001. The FS and BLM gave people more time to comment, both in response to several requests for extensions, and because of the general disruption stemming from the September 11th terrorist attacks. In December 2006, the BLM elected to not be a cooperating agency in this planning effort and to undertake changes to BLM plans through a separate planning process.

We created an official website at www.fs.fed.us/r1/planning/lynx.html. The website continues to provide information, including the information used to develop the Proposed Action, the DEIS, and FEIS.

During scoping we held numerous open-house meetings to provide a better understanding of the lynx proposal and to gain an understanding of public issues and concerns (FEIS, Vol. 1, p. 18). We mailed out more than 6,000 letters about the proposal and upcoming meetings to a mailing list of people interested in land management issues. By December 17, 2001 we had received 1,890 public responses to the scoping notice. We then evaluated and summarized those responses in a report entitled *Summary of Public Comments* (see the *Scoping* section of the Project Record). Responses received after December 17, 2001, but before the release of the Draft Environmental Impact Statement (DEIS) in January 2004 were also considered. A summary of these comments can also be found in the *Scoping* section of the Project Record. In mid-May 2002 we mailed an eight-page update to the more than 2,000 addresses of those who responded to the scoping notice.

We decided to prepare an EIS because of the level of interest expressed during scoping. On August 15, 2002, we published a Notice of Intent to prepare an Environmental Impact Statement in the *Federal Register* (Vol. 67, No. 158, pp. 53334 to 53335). There were five responses to the Notice of Intent, which we also considered.

On January 16, 2004, a Notice of Availability of the DEIS was published in the *Federal Register* (Vol. 69, No. 11, p. 2619). This notice began a 90-day public comment period. At that time, we sent copies of the DEIS (either paper or CD versions), or the summary of the DEIS to a variety of interested parties (FEIS, Vol. 1 p 19). The documents are also available on the web site: www.fs.fed.us/r1/planning/lynx.html.

We hosted open-house meetings in February and March of 2004 to provide the public with a better understanding of the DEIS and its alternatives. Over 380 people attended the open houses which were held in four states and 25 communities. We accepted public comments on the DEIS either sent through the mail or via E-mail. The public comment period ended on April 15, 2004, with the agency receiving well over 5,000

comments. We used those comments, as well as late comments, to help formulate Alternative F, to help clarify and add to the analysis, to correct errors in the DEIS, and to update the FEIS. We responded to all of the comments on the DEIS in the Response to Comments (FEIS, Vol. 2).

Issues

As a result of the public participation process; review by other federal, state, tribal, and local government agencies; and internal reviews, we identified five primary issues, which are described in detail in the FEIS, Vol. 1, Chapter 2. The issues were used as a basis for developing the management direction in the alternatives, and were used to analyze effects. The issues are:

1. Over-the-snow recreation. The effects of limiting the growth of designated over-the-snow routes on opportunities for over-the-snow recreation.

2. Wildland fire risk. The effects of the management direction on the risks to communities from wildland fire.

3. Winter snowshoe hare habitat in multistoried forests. The effect on lynx of allowing projects in winter snowshoe hare habitat in multistoried forests.

4. Precommercial thinning. The effects of limiting precommercial thinning on restoring tree species and forest structures that are declining.

5. FWS Remand decision. The appropriate level of management direction applied to activities that the FWS remand notice found were not a threat to lynx populations.

Alternatives considered in detail

Alternative A, the No Action Alternative. Analyzing a no-action alternative is a requirement of NEPA at 40 CFR 1508.14(d), and of FS planning procedures. The analysis of the effects of Alternative A in the FEIS considers the effects of the forest plans as they currently exist, including any previous amendments. In this case, "no action" means no amendment to the already existing plans, and no additional specific direction to conserve Canada lynx. While the FS has been following the Conservation Agreements signed with the FWS and has considered the LCAS when evaluating projects, the LCAS measures have not been incorporated as plan direction. A decision to adopt Alternative A would not adopt the measures of the LCAS into the plans, but also would not void the existing Conservation Agreements or the consultation requirements of ESA. A decision to not adopt some of the lynx management direction in any of the action alternatives would have been a decision to select a part of Alternative A.

Alternative B, the Proposed Action. The Proposed Action was developed from conservation measures recommended in the LCAS. (See Appendix A in the FEIS, pp. 401 to 438 for a crosswalk from the LCAS, to the proposal as written in the scoping letter; the Proposed Action, Alternative B, found in the Draft and Final EISs; and

Alternative F in the FEIS.) Alternative B addresses activities on National Forest System lands that can affect lynx and their habitat. The exact language of the goal, objectives, standards, and guidelines for Alternative B and all the other action alternatives can be found in the FEIS (Table 2-1, pp. 41 to 69).

Alternative C. Alternative C was designed to respond to issues of over-the-snow recreation management and foraging habitat in multistoried forests, while providing a level of protection to lynx comparable to Alternative B, the Proposed Action. Alternative C would add direction to the plans similar to the LCAS, but would have fewer restrictions on new over-the-snow trails and more restrictions on management actions in winter snowshoe hare habitat in multistoried forests. The exact language of the goal, objectives, standards, and guidelines for Alternative C and all the other action alternatives can be found in the FEIS (Table 2-1, pp. 41 to 69).

Alternative D. Alternative D was designed to address the issues of managing over-the-snow recreation and multistoried forests, similar to Alternative C. Alternative D also allows some precommercial thinning in winter snowshoe hare habitat, while still contributing to lynx conservation. Alternative D would add direction to the plans similar to the LCAS, but having fewer restrictions on new over-the-snow trails and precommercial thinning, and more restrictions than the LCAS (Alternative B) on management actions in winter snowshoe hare habitat in multistoried forests, but less than Alternative C. The exact language of the goal, objectives, standards, and guidelines for Alternative D and all the other action alternatives can be found in the FEIS (Table 2-1, pp. 41 to 69).

Alternative E, the DEIS preferred alternative. Alternative E addresses the issue of wildland fire risk while contributing to lynx conservation. It also responds to statements made in the Remand Notice (USDI FWS, 2003) that FWS has no information to indicate grazing or snow compaction are threats to lynx at this time. This was done by changing the grazing and human uses standards to guidelines. Alternative E would add direction to the plans similar to the LCAS, but has fewer restrictions on new over-the-snow trails and on fuel reduction projects proposed in a collaborative manner, and more restrictions on management actions in winter snowshoe hare habitat in multistoried forests. The exact language of the goal, objectives, standards, and guidelines for Alternative E and all the other action alternatives can be found in FEIS (Table 2-1, pp. 41 to 69).

Alternative F, the FEIS preferred alternative. Alternative F was developed from public comments on the DEIS and by pulling together parts of the other alternatives. Since it was developed from the other alternatives, the effects of Alternative F is within the scope of the effects of the alternatives analyzed in the DEIS.

Alternative F addresses many comments about problems and concerns with Alternatives E, the DEIS preferred alternative. In particular many people and FWS felt Alternative E would not meet the purpose and need because it did not provide the

regulatory mechanisms to adequately address lynx needs. Alternative F was designed to provide adequate regulatory mechanisms for those risk factors found to be a threat to lynx populations – specifically those factors related to the quantity and quality of lynx habitat as discussed in the FEIS, Vol. 1, section *Management direction considered*.

Alternative F addresses comments about where to apply the management direction. Many comments suggested the management direction should only be applied to occupied habitat. Therefore, Alternative F is evaluated under two scenarios: (1) management direction would be incorporated into all forest plans and would *apply to all mapped lynx habitat*, whether or not occupied; and (2) management direction would be incorporated into all forest plans but would only *apply to occupied habitat.* Under Scenario 2, the direction should be "considered" for unoccupied units, but would not have to be followed until such time as lynx occupy the unit. The Nez Perce, Salmon-Challis, Beaverhead-Deerlodge, Bitterroot, Ashley, and Bighorn NFs, and the disjunct mountain ranges on the Custer, Gallatin, Helena, and Lewis and Clark NFs are unoccupied based on the best scientific information available at this time (USDA FS, USDI FWS 2006a).

Other management direction considered

Comments on the DEIS identified a variety of suggestions for management direction. Some of the suggestions were incorporated into the selected alternative, others were not. The FEIS, Vol. 1 pp. 71-102 provides a thorough discussion of these comments and our considerations. The following section includes discussion of some these comments and how they were considered, but not all of the suggestions considered.

The decision

The management direction in Alternative F, Scenario 2 modified (referred from now on as the *selected alternative,* see - Attachment 1) is amended into all Forest Plans in the planning area. The management direction incorporates the terms and conditions FWS issued in their biological opinion (USDI FWS 2007). This management direction includes a goal, objectives, standards, and guidelines related to all activities (ALL), vegetation management (VEG), grazing management (GRAZ), human uses (HU), and linkage (LINK). *Goals* are general descriptions of desired results; *objectives* are descriptions of desired resource conditions; *standards* are management requirements designed to meet the objectives; and *guidelines* are management actions normally taken to meet objectives. Guidelines provide information and guidance for project and activity decision-making (FEIS, Vol. 1 p. 8). The Forest Service and FWS developed the selected alternative in a collaborative manner (Project File/Coordination/with FWS, and Project File/Alternatives/FEIS alternatives).

The selected alternative provides a balance of meeting the purpose and need, and addressing the five primary issues, including other public comments. Alternative B does not provide the management direction necessary for winter snowshoe hare habitat

in multistoried forests. Alternative C, may be best for lynx, but does not address any other issues. Alternative D addresses the need to restore tree species in decline, but we have determined it may allow too much activity in winter snowshoe hare habitat and result in more extensive adverse effects. Alternative E address wildfire risk to communities, but based on our analysis and comments from FWS and the public, may not provide the necessary direction to contribute to conservation and recovery of lynx.

We determined, through our analysis and with concurrence from FWS, the selected alternative contributes to conservation and recovery of lynx, while allowing some activities to occur in lynx habitat that may have some adverse effects on lynx. We determined it was important and acceptable to restore tree species in decline and address wildland fire risks to communities. This decision allows some possible adverse effects on 6.5 percent of lynx habitat (through a combination of fuels treatment in the wildland urban interface (WUI) and precommercial thinning). However, all vegetative standards remain applicable to 93.5 percent of lynx habitat.

The following describes the risk factors, what the LCAS proposed (Alternative B), issues related to the proposed action, what Alternative E (the DEIS preferred alternative) included, comments we received on the DEIS, consideration of new information, and finally what was incorporated into the selected alternative and why.

Management direction related to vegetation

Lynx require certain habitat elements to persist in a given area. Lynx productivity is highly dependent on the quantity and quality of winter snowshoe hare habitat. Winter snowshoe hare habitat may be found in dense young regenerating forests – where the trees protrude above the snowline and in multistoried forests where limbs of the overstory touch the snowline, in addition to shorter understory trees that provide horizontal cover. Certain activities, such as timber harvest, prescribed burning and wildfires, can affect the amount and distribution of these habitat elements, which can in turn affect lynx productivity. Timber harvest can be beneficial, benign, or detrimental depending on the harvest method, the spatial and temporal occurrence on the landscape and the inherent vegetation potential of the site (FEIS, Vol. 1, Appendix P).

Objectives for vegetation management

Objectives define desired conditions for lynx habitat. The LCAS identified four primary objectives which are reflected in Alternative B as *Objectives VEG O1, VEG O2, VEG O3, and VEG O4*. These objectives essentially remain the same among all alternatives. Objectives VEG O1, VEG O2 and VEG O4 were clarified in the selected alternative based on comments on the DEIS, but their intent is the same as the in LCAS.

Standards and guidelines relating to quantity of winter snowshoe hare habitat

Standard VEG S1. In order to provide a distribution of age classes, the LCAS recommended that an lynx analysis unit (LAU) (an area the size of a female lynx home range) not have more than 30 percent of the lynx habitat in an unsuitable condition, and

if an LAU was at 30 percent then vegetation management projects should not create more. Lynx habitat in an unsuitable condition includes those forests in a stand initiation structural stage that are too short to provide winter snowshoe hare habitat. These conditions are created by stand-replacing wildfires, prescribed burns that remove all of the vegetation, or regeneration timber harvest. This recommendation is reflected in Alternative B *Standard VEG S1*.

Some people felt the 30 percent criterion was too high and others said it was too low based on how fires burn in lynx habitat. In addition, some people felt that constraining the 30 percent criterion to a single LAU was too restrictive, as fires burn across vast areas. Fire is the most common disturbance in lynx habitat. Generally, large stand replacing fires burn every 40 to 200 years and smaller low intensity fires burn in the intervals between stand replacing fires (FEIS, Vol. 1, p. 72 and 213-214). The 30 percent criterion was based on a way to maintain lynx habitat over time (Brittel et al. 1989).

None of the alternatives change the 30 percent criterion. However, Alternatives C, D, and E change the area the standard would be considered from an LAU to a larger landscape. Alternatives C and E apply the standard to an LAU or in a combination of immediately adjacent LAUs; Alternative D applies the standard to a subbasin or isolated mountain range. Some people liked the idea of applying the standard to a larger area, others did not. In their comments on the DEIS FWS recommended the standard be applied to a single LAU in order to maintain a good distribution of lynx habitat at the scale of a lynx home range.

The selected alternative applies the management direction to a single LAU to ensure a variety of structural stages are provided within the home range. In addition, the selected alternative was reworded to clarify what "unsuitable habitat" entails and what types of vegetation projects create this condition.

Standard VEG S2. The LCAS also recommended that timber harvest not change more than 15 percent of lynx habitat to an unsuitable condition (stand initiation structural stage that is too short to provide for winter snowshoe hare habitat) over a decade. The purpose of this standard was to limit the rate of management induced change in lynx habitat (FEIS p. 74). This recommendation is reflected in Alternative B *Standard VEG S2.*

In 2003, the effect timber harvest historically had on creating "unsuitable habitat" on Forest Service lands in Region 1 (Hillis et al. 2003) was analyzed. The analysis was based on hydrologic unit codes (HUC) (similar to the size of a lynx home range). This analysis found only 2.5 percent of the HUCs exceeds the 15 percent criterion. Since this criterion was rarely exceeded in the past, and the amount of regeneration harvest the agency does now has been dramatically reduced over the past decade (Project File/Analysis/Vegetation/FEIS/Data), Standard VEG S2 was changed to Guideline VEG G6 in Alternative C, and dropped as a standard or guideline in Alternatives D and E.

FWS comments on the DEIS said that dropping Standard VEG S2 could allow potentially negative effects to lynx to accumulate. Removal of the standard could result in reducing the amount of lynx habitat over a short period of time. Based on these comments, Standard VEG S2 was included in the selected alternative. In addition, the standard was reworded to clarify that it only applies to timber management practices that regenerate a forest (clearcut, seed tree, shelterwood, group selection).

Guideline VEG G1. The LCAS also recommended creating forage (winter snowshoe hare habitat) where it was lacking. *This is reflected as Guideline VEG G1 in Alternative B*. This guideline is retained in the selected alternative. The wording clarifies that the priority areas for creating forage should be in those forests that are in the stem-exclusion, closed canopy structural stage to enhance habitat conditions for lynx and their prey. Basically it says we should focus regeneration efforts in pure lodgepole stands, with little understory, especially where forage is lacking.

Other related comments. Other comments we received on the DEIS relating to the amount or spatial distribution of winter snowshoe hare habitat were in regards to including a standard to limit type conversion, and limiting the size of clearcuts and other regeneration harvest units (FEIS Vol. 1 p. 75-76 and FEIS Vol. 2 27-27, 56-57, 59-60). Neither of these standards were recommended in the LCAS.

Objectives VEG O1, VEG O2, VEG O3 and VEG O4 describe the desired conditions of lynx habitat and all are consistent with the intent to minimize habitat conversions. Projects and activities should be designed to meet or move towards objectives; therefore a standard for type conversion was not necessary.

Openings created by even-aged harvest are normally 40 acres or less. Creating larger openings requires 60-day public review and Regional Forester approval, with some exceptions (R1 Supplement Forest Service Handbook 2400-2001-2; R2 Supplement 2400-99-2). Koehler (1990) speculated that openings created by regeneration harvest, where the distance-to-cover was greater than 325 feet, might restrict lynx movement and use patterns until the forest re-grows. While it is assumed lynx would prefer to travel where there is forested cover, the literature contains many examples of lynx crossing unforested openings (Roe et al. 2000).

Larger openings can often more closely resemble vegetative patterns similar to natural disturbance events (e.g. fire, windthrow, and insect outbreaks) (FEIS, Vol. 1, Appendix P). A disturbance pattern characterized by a few large blocks may be desirable if large areas of forested habitat are a management goal, or if the predation and competition that occur at the edges between vegetation types is a problem (Ruggiero et al. 2000, p. 431). While it is true lynx may not use large openings initially, once they have re-grown and can provide cover, generally after ten to 30 years, such areas may be important to lynx (FEIS, Vol. 1, Appendix P, p. 40092).

The selected alternative already contains direction to consider natural disturbances and maintain habitat connectivity. Based on this management direction and evaluating the information in the *Ecology and Conservation of Lynx in the United States* (Ruggiero et al. 2000) and the LCAS, we decided that a standard limiting the size of openings was unnecessary to improve lynx conservation.

Standards and guidelines relating to quality of winter snowshoe hare habitat

Snowshoe hare are the primary prey for lynx. Winter snowshoe hare habitat is a limiting factor for lynx persistence. Snowshoe hare habitat consists of forests where young trees or shrubs grow densely. In addition to dense young regenerating forests, multistory forests that have trees whose limbs come down to snow level and have an abundance of trees in the understory, also provide winter snowshoe hare habitat. During winter, hare forage is limited to twigs and stems that protrude above the snow and the hares can reach. The LCAS recommended management direction to address winter snowshoe hare habitat in relation to precommercial thinning. Alternative B, the proposed action, splits the management direction to address actions occurring in winter snowshoe hare habitat in young regenerating forests (Standard VEG S5) and actions occurring in winter snowshoe hare habitat found in multistory forests (Standard VEG S6).

Standard VEG S5. The LCAS recommended no precommercial thinning that reduces winter snowshoe hare habitat in the *stand initiation structural stage*. This is reflected in Alternative B *Standard VEG S5.* Precommercial thinning within 200 feet of administrative sites, dwellings, or outbuildings has been allowed under current practices because it was found to have no effect to lynx due to location near structures.

Some people said this standard should apply to all vegetation management projects, not just precommercial thinning. Precommercial thinning is the primary activity that occurs in young regenerating forests. On occasion, other activities such as fuel treatments or prescribe burning, could occur. Alternatives C and D were expanded to apply to all vegetation management projects. Alternative E, the DEIS preferred alternative, only applied it to precommercial thinning projects.

Only a few comments were received on the DEIS saying the standard should apply to all type of projects. FWS did not comment on the more narrow application of the standard.

Standard VEG S5 in the selected alternative only applies to precommercial thinning because it is the predominate activity in young regenerating forests and it is has been identified as the risk factor for reducing winter snowshoe hare habitat (LCAS, Ruggiero et al. 2000, USDA FS and USDI BLM 2000, USDI FWS 2000a, 2000b, USDI FWS 2003).

As noted earlier in the issues section, some people said precommercial thinning should be allowed to restore tree species in decline or to encourage future large trees. Alternative D addresses this issue by allowing precommercial thinning of planted

western white pine, whitebark pine, aspen, and larch, ponderosa pine, and lodgepole pine in certain situations. Alternative E, the DEIS preferred alternative, only allowed precommercial thinning adjacent to structures, for research or genetic tests, or for fuel treatment projects identified in a collaborative manner.

Several comments on the DEIS said the allowances for precommercial thinning in Alternative D should be incorporated into the final alternative. Several comments said that some allowance for adaptive management should be incorporated and that thinning should be allowed where it could be done to promote or prolong winter snowshoe hare habitat.

FWS comments on the DEIS said thinning adjacent to administrative sites, dwellings, or outbuildings and for research and genetic tests would have little effect on lynx or their habitat. In addition, they said the following thinning activities would have cumulatively little effect upon lynx habitat and, in some cases, advance natural ecological conditions. These include: (1) daylight thinning of planted rust-resistant western white pine where 80 percent of winter snowshoe hare habitat is maintained; (2) thinning within whitebark pine stands; (3) western white pine pruning; and (4) thinning for Christmas trees.

We evaluated the comments and incorporated the following elements into the selected alternative:

- Since Standard VEG S5 is concerned with reduction of winter snowshoe hare habitat, western white pine pruning and thinning for Christmas trees can occur if winter snowshoe hare habitat is not reduced. Generally these activities are done on an individual tree basis and do not change the characteristics of the habitat.
- Precommercial thinning can be done adjacent to administrative sites, dwellings, or outbuildings and for research and genetic tests since these would have benign effects on lynx.
- Precommercial thinning can be done for planted rust-resistant western white pine, whitebark pine, and aspen. Thinning to enhance whitebark pine and aspen would benefit other wildlife species and effects only limited acres in lynx habitat (FEIS, Vol. 1 Lynx section). Daylight thinning will be allowed around individual planted rust-resistant western white pine where 80 percent of the winter snowshoe hare habitat is retained. This may reduce some habitat effectiveness, but since this tree species has declined 95 percent across its range, we determined it was important to allow a limited amount of thinning to retain the species on the landscape.

Under these exceptions, about 64,000 acres could be precommercial thinned in occupied lynx habitat over the next decade – assuming full funding. This is likely to affect less than 2 percent of winter snowshoe hare habitat (FEIS Vol. 1 p. 188, USDI FWS 2007).

We also considered allowing precommercial thinning in vast areas of young regenerating forests where precommercial thinning could be done to prolong winter snowshoe hare habitat. We also considered precommercial thinning in young regenerating forests composed primarily of western larch with more than 10,000 trees

per acre – where larch would be removed to favor other species that provide better winter snowshoe hare habitat. In both these situations the general belief is that these activities may be beneficial to lynx in the long term, but information is not available at this time to support that hypothesis. So, the standard was modified to provide an avenue to consider new information that may in the future prove or disprove these hypotheses. The criterion provided in the selected alternative states:

Based on new information that is peer reviewed and accepted by the regional level of the Forest Service and the state level of FWS, where a written determination states:
a. that a project is not likely to adversely affect lynx; or
b. that a project is likely to have short term adverse effects on lynx or its habitat, but would result in long-term benefits to lynx and its habitat.

This criterion allows incorporation of new peer reviewed information, but requires agreement by FWS before it may be utilized.

Standard VEG S6. The LCAS recommended no precommercial thinning that reduces *winter snowshoe hare habitat in multistory forests*. This is reflected in Alternative B *Standard VEG S6.* Precommercial thinning within 200 feet of administrative sites, dwellings or outbuildings has been allowed under current practices because it was found to have no effect to lynx due to location near structures. The LCAS did not contain a recommendation related to other management actions.

As noted in Issue #3 some people said the management direction should preclude all activities that reduce winter snowshoe hare habitat in multistory forest. Alternatives C, D, and F would apply the management direction to all vegetation management activities in multistory forests that provide winter snowshoe hare habitat. Each alternative has different allowances for vegetation management. Alternative E, the DEIS preferred alternative, changed the management direction from a standard to Guideline VEG G8. The intent of the guideline was to direct vegetation projects to provide winter snowshoe hare habitat through time.

Multistory forest structures can develop from natural processes, such as insects and diseases and fire, or management actions like timber harvest that create small openings where trees and shrubs can grow.

Comments on the DEIS suggested that management direction for multistory forests should be in the form of a standard. FWS suggested the agencies review the latest information or research on lynx use of forests in multistoried structural stages prior to developing a final preferred alternative.

Recent research in northwest Montana demonstrates that mature multistoried forests provide important winter snowshoe hare habitat and are more important than younger stands (FEIS, Vol. 1, p. 22). In fact, the researchers questioned whether or not the LCAS would provide for lynx viability and recovery if only precommercial thinning were precluded.

Based on this new information we retained Standard VEG S6 in the selected alternative, but we preclude *all* vegetation management activities that reduce winter snowshoe hare habitat in multistory forests, not just precommercial thinning as recommended in the LCAS. We would allow minor reductions in winter snowshoe hare habitat for activities within 200 feet of structures, research or genetic tests, and for incidental removal during salvage harvest (associated with skid trails). Fuel treatment projects within the WUI are also exempt from this standard (see fuel treatment discussion further in this decision). We also allow timber harvest in areas that have the potential to improve winter snowshoe hare habitat but presently have poorly developed understories.

We believe and FWS concurred that protecting winter snowshoe hare habitat in multistoried forests will further retain and promote important lynx habitat components.

Standards and guidelines relating to denning habitat

Woody debris – piles of wind-thrown trees, root wads, or large down trees – provides lynx denning sites. Large woody debris gives kittens an escape route from predators, as well as cover from the elements. During the first few months of life, when kittens are left alone while the mother hunts, denning habitat must be available throughout the home range (Bailey 1974). The LCAS recommended two standards and two guidelines related to denning habitat. These are reflected in Alternative B as *Standards VEG S3 and VEG S4 and Guidelines VEG G2 and VEG G3*.

In Alternative B Standard VEG S3 defers vegetation management projects in places with the potential to develop into denning habitat if an LAU contains less than ten percent denning habitat. Standard VEG S4 limits salvage harvest in some situations. Guideline VEG G2 says when more denning habitat is desired to leave standing trees and coarse woody debris. Guideline VEG G3 says to locate denning habitat where there is a low probability of stand-replacing fire.

Development of alternatives for the DEIS

Some people said that den sites can be found in old regenerating forests and the agency should be allowed the flexibility to create denning habitat in regeneration units, especially since denning habitat should be located in or adjacent to forage. In Maine, 17 den sites were located in a variety of stand types, including 10-20 year old clearcuts adjacent to residual stands (FEIS, Vol. 1, Appendix P).

After reviewing the literature, we determined it was reasonable to have an alternative that allows for flexibility to mitigate or create denning habitat, especially when there is less than 10 percent denning habitat. Alternatives D and E modify Standard VEG S3 to say where there is less than 10 percent denning habitat either: 1) defer management, or 2) move towards 10 percent by leaving standing dead trees or piles of coarse woody debris. This combined the guidance in Alternative B, Guideline VEG G2 with the Standard VEG S3.

Some people said salvage harvest should not be singled out because it is not the only management action that removes denning habitat. Standard VEG S4 limits salvage harvest after a disturbance kills trees in areas five acres or smaller – if there is less than 10 percent denning habitat.

We evaluated whether other management actions, such as prescribed burning, chipping, piling and burning, etc. should be precluded. Salvage harvest is the primary management action that removes denning habitat because it removes dead and down timber; therefore we determined other actions did not need to be constrained. However, we determined that Standard VEG S4 should be a guideline in Alternatives D and E because it provides guidance on how to design projects. The guideline says when there is less than 10 percent denning habitat, then units should consider retaining small areas of dead trees. As noted in Alternatives D and E, Standard VEG S3, units can mitigate when there is less than 10 percent denning habitat. It is possible to create denning habitat or retain pockets, but units should be allowed to evaluate denning needs on a site specific basis.

The intent of Alternatives D and E, is where denning habitat is lacking, units should recognize it, retain large and small patches and/or mitigate, especially if it denning habitat can be created in or near new forage areas. In most areas denning habitat is likely not limiting because it is found in such a variety of stand conditions and ages.

Considerations for alternatives in the FEIS

In comments on the DEIS some people said there was no basis for retaining ten percent denning habitat – they wanted the standard dropped altogether. Others wanted more denning habitat required. Some people asked for an alternative to prohibit harvest in old growth or mature timber to protect denning habitat. Others said that all old growth should be protected by management direction because some administrative units do not meet old growth standards.

Some people said allowing salvage logging in disturbed areas smaller than five acres lacked a scientific basis and that all salvage harvest should be deferred. Most comments on the DEIS said that management direction for denning habitat should be in the form of standards.

In their comments on the DEIS FWS supported Standard VEG S3, including conditions 1 and 2 in Alternative E, but was concerned about changing Standard VEG S4 into Guideline VEG G7. FWS recommended development of a standard that: 1) maintains ten percent denning habitat within an individual LAU; 2) is randomly/evenly distributed across the LAU; and 3) ensures recruitment of future denning habitat.

Based on these comments, we reconsidered the management direction for denning habitat. We held discussions with the researchers, lynx biology team and FWS to further explore denning habitat – where it is found, how to measure it, and how to ensure plans provide the appropriate level of management direction.

Where denning habitat is found: Since 1989 researchers have discovered that lynx denning habitat is found in a variety of structural stages from young regenerating forests to old forests. The integral component of lynx den sites appears to be the amount of downed, woody debris, not the age of the forest stand (Mowat, et al. 2000). Research by Squires (pers. com. Oct. 30, 2006) has found that of 40 den sites in northwest Montana most were located under large logs, but "jack-strawed" small diameter wind thrown trees, root wads, slash piles, and rock piles were also used (FEIS, Vol. 1 p. 172-173). These structural components of lynx den sites can often be found in managed (logged) and unmanaged (e.g. insect damaged, wind-throw) stands.

How to measure denning habitat: Retaining ten percent denning habitat is based on maintaining lynx habitat over time (Brittel et al. 1989). Brittel recommended a balance of conditions – 30 percent forage, 30 percent unsuitable that would grow into forage, 30 percent travel, and ten percent denning.

We evaluated how to measure 10 percent denning based on where the habitat can be found. We evaluated using mature and over-mature forests as a first approximation of denning habitat. Generally mature and over-mature forests contain a component of dead and down trees which lynx use. If these two components were used then all units would show much more than ten percent denning habitat as all forests have at least twenty percent of their forest in mature stand structures (Project file/Analysis/Forests/FEIS/Data). In addition, these stand structures do not account for all the stand conditions where denning habitat can be found because denning habitat can be found in young forests with slash piles, lodgepole forests with insect and disease outbreaks, areas recently burned in wildfires, as well as variety of other forest conditions. Based on these discussions, we decided, with agreement from FWS, that using stand structures as a proxy would show an abundance of denning habitat; therefore the requirement to retain ten percent was found not to be a useful measure.

How to provide for denning habitat:

We considered restricting harvest in mature forests and old growth. The important component for all lynx den sites appears to be the amount of down woody debris present, not the age of the forest (Mowat et al. 2000, Appendix P). Old growth and mature forests can provide denning habitat, but based on review of research a variety of forest structures also provide denning habitat. We considered prohibiting timber harvest in old growth but dismissed this from detailed consideration because denning habitat is found in a variety of forest structures (FEIS, Vol. 1 p. 81).

We considered restricting salvage harvest. Standard VEG S4 in Alternatives B and C limits salvage harvest after a disturbance kills trees in areas five acres or smaller – if there is less than 10 percent denning habitat. The standard was changed to a guideline in Alternatives D and F. The guideline says that when there is less than 10 percent denning habitat, then units should consider retaining small areas of dead trees.

Salvage harvest can remove denning habitat. However, den sites are found in areas with large logs, "jack-strawed" small diameter wind thrown trees, root wads, slash piles, and rock piles. These areas need not be extensive – they are generally small areas that provide sufficient cover for lynx den sites.

We reevaluated whether or not denning habitat is a limiting factor for lynx. Based on discussions with research, we reaffirmed that denning habitat is found in a variety of forest conditions, they are found in small pockets scattered across an area and are generally found across the landscape, and lynx denning sites are not believed to be a limiting factor (J. Squires, pers. com. Oct. 30, 2006). In addition, management actions can create denning habitat by strategically leaving piles of woody debris, or leaving residual trees where denning habitat is lacking.

Therefore, we determined that restricting salvage harvest was not necessary, but that projects should consider the abundance and distribution of denning habitat in their project design and leave den site components (piles of down wood, or standing dead trees) where it is lacking.

We considered management direction in the form of standards vs. guidelines. We determined management direction for denning habitat should be incorporated into one set of management direction. Incorporating all the direction into one standard or guideline reduces the potential for conflicts between directions, focusing on the important components of denning habitat.

We determined a guideline would be best suited for this management direction because denning habitat can be found in a variety of forest structures and in small areas, is not a limiting factor for lynx, and the management direction would provide design features for projects. Therefore we developed Guideline VEG G11 in the selected alternative. The guidance is to: 1) have denning habitat distributed across an LAU (in the form of pockets of large woody debris, either down logs or root wads, or large piles of jack-strawed trees); and 2) if denning habitat is lacking, projects should be designed to retain coarse woody debris – by leaving piles or retaining residual trees that can become denning habitat later.

Objectives VEG O1, VEG O2, VEG O3, and VEG O4 and Standards VEG S1, VEG S2, and VEG S6 also indirectly promote the development and retention of the structure needed for denning habitat through vegetation management that promotes a mosaic of forest conditions across the landscape (USDI FWS 2007). Based on the above, FWS determined that projects were unlikely to reduce denning structure to levels that result in adverse effects to lynx (USDI FWS 2007).

In addition, the Lynx Biology Team (the team responsible for the LCAS) is in the process of updating the LCAS denning habitat recommendations based on this new information about where denning habitat is found and its distribution.

Consideration of fuel treatment projects

Most lynx habitat consists of high-elevation spruce/fir and lodgepole pine forests, but some lynx habitat may be found in mixed conifer forests. Generally, forests in lynx habitat are close to historic conditions, meaning the long fire return interval has not been affected to any large degree by more recent fire suppression as is the case in dryer forests with short fire return intervals. However, some stand conditions are conducive to extreme fire behavior because of insect and disease mortality or the amount of tree limbs that provide ladder fuels. Fuel treatments designed to reduce ladder fuels and/or reduce the potential size (Finney 2001) and severity of wildland fires may be proposed in lynx habitat.

After the 2000 wildfire season, which burned a substantial amount of acreage, the Forest Service began to set goals for wildfire management. Several documents serve to provide a national prioritization system for the selection of hazardous fuel treatments on Federal lands with close coordination among the Federal, State, and other agencies, as well as Tribes and communities. The criteria for prioritizing lands for hazardous fuels treatment generally correspond to: (1) closest proximity to communities at risk in the WUI; (2) strategic areas outside the WUI that prevent wildland fire spread into communities or critical infrastructure; (3) areas outside of WUI that are in Condition Classes 2 or 3; and (4) other considerations (FEIS, Vol. 1 p. 215).

The LCAS did not specifically address fuel treatments. During scoping we identified wildland fire risk as an issue, issue # 2 (FEIS, Vol. 1 p. 21-22). We developed a range of alternatives to address this issue.

In Alternative A, there would be no change in existing plan direction on the treatment of fuels.

Alternative B would allow fuel treatments to go forward if they:

- Meet the 10 percent denning standard (Standard VEG S3 and S4)
- Meet 30 percent unsuitable habitat standard (Standard VEG S1) or 15 percent unsuitable habitat created by timber harvest standard (Standard VEG S2)
- Use methods other than precommercial thinning in winter snowshoe hare habitat (Standards VEG S5 and VEG S6)

Alternatives C and D would not allow any type of fuel reduction project that reduced winter snowshoe hare habitat – except within 200 feet of structures.

Alternative E, the DEIS preferred alternative would not apply the vegetation standards (Standards VEG S1, S3, and S5) to fuel treatments developed in a collaborative manner, as described in the *10-Year Comprehensive Strategy Implementation Plan* (USDA FS 2001). This exception was used because a multi-party Memorandum of Understanding was signed in 2003 by the FS, BLM, and FWS (USDA FS et al. 2003) concerning fuel treatments and collaboration.

Many comments were received on the DEIS regarding fuel treatments. Some people suggested there be no exemptions for fuel treatments. Several groups suggested that only fuel treatments within 500 yards of human residences and other structures be allowed because these areas are generally not appropriate to restore lynx anyway. Others felt the exemptions should only apply to the WUI and that the agencies should define the WUI. Others liked the exemptions as they were written in Alternative E.

FWS cautioned against exempting a broad range and unknown number of actions from plan direction. They felt, as currently worded in Alternative E, the exemption was sufficiently vague that it did not allow an adequate analysis of potential effects upon lynx or lynx habitat and it could result in extensive adverse effects to lynx.

FWS suggested Standard VEG S5 be modified to restrict precommercial thinning to within one mile of structures. They did not believe any exemptions were needed for Standards VEG S1 or S2 since so very few LAUs were near the thresholds identified in these standards. They felt very few proposals would be constrained by the standards. They also questioned why Condition Class 1 forests were not specifically excluded from the exemptions. Condition Class 1 forests include areas where fires have burned as often as they did historically; the risk of loosing key ecosystem components is low; and vegetation composition and structure is intact and functioning. The FWS went on to say they recommended that processes, actions, or types that would be exempt be clearly identified.

We reviewed and discussed the comments with FWS and decided to modify the fuel treatment exemption for the selected alternative. We thoroughly discussed the issue of how to allow for fuel treatments to reduce the hazard to communities – while providing for the conservation and recovery of lynx (Project File/Alternatives/FEIS alternatives).

Based on our discussions we decided none of the vegetation standards will apply to fuel treatment projects within the WUI as defined by the Healthy Forests Restoration Act (HFRA), within a certain limit. We constrained the number of acres that do not meet the standards to 6 percent of lynx habitat within a National Forest, and we added the FWS term and condition that fuel treatment projects can cause no more than 3 adjacent LAUs to not meet standard VEG S1.

In addition we added Guideline VEG G10 which says fuel treatment projects within the WUI should be designed *considering* Standards VEG S1, S2, S5, and S6. The intent in adding this guideline is that although these vegetation standards do not apply to fuel treatment projects within the WUI as defined by HFRA, these projects should still consider the standards in the development of the proposal. In many cases projects can be designed to reduce hazardous fuels while providing for lynx needs. This guideline ensures lynx are considered in the project design – but allows for the flexibility of not meeting the standards in situations where meeting the standards would prevent the project from reducing the hazardous fuels in the WUI.

The following describes some of the considerations in the development of this direction.

Application to Standards VEG S1 and S2: Under Standards VEG S1 and S2 it is likely very few projects would exceed the 30 percent and 15 percent criteria because many fuel treatment projects are not regeneration harvest. If regeneration harvest is applied it is likely to be done to create a fuel break adjacent to communities or to break up the continuity of fuels (Finney 2001). Since part of our direction under the Healthy Forests Initiative is to look for ways to expedite fuel reduction projects we determined that we did not want to have to amend forest plans for the few cases where not meeting the standards may be necessary.

Application to Condition Class 1: Many forests in lynx habitat are in Condition Class 1, meaning these forests have not missed a fire cycle because large, stand-replacing fire only occurs every 100 to 200 years. However, some of these Condition Class 1 forests can still be a threat to communities. An example is lodgepole pine forests which are at the age of being susceptible to mountain pine beetle outbreaks. Regenerating lodgepole pine, adjacent to a community, may be needed to reduce the severity and size of a wildland fire. Fire is a natural process in these ecosystems; but there is a need to balance the natural process with the risk of fire destroying homes; therefore we did not limit the standard to particular condition classes.

What locations should be exempted: We evaluated various options regarding where the standards should be applied and we used a variety of criteria to evaluate which option to carry forward for detailed consideration. The criteria included: 1) is there a defined area; 2) can effects be meaningfully evaluated; 3) would it provide for community protection; and 4) does it meet the purpose and need. (For further detail see FEIS, Vol. 1 pp. 85-86 which summarizes the options and considerations and the Project File/Alternatives/FEIS Alternatives/documents July 29, 2004 through February 24, 2005).

Based on comments, national direction regarding fuel treatments, and the effects on lynx, we decided exempting fuel treatment projects within the WUI, within limits would be a reasonable balance. We decided to use the definition established by Congress in the HFRA as it established a national procedure for determining the extent of the WUI (USDI, USDA FS 2006).

What limit(s) should be applied: We elected to put a limit on the amount of fuel treatment projects that could exceed the vegetation standards, since WUI has not been mapped on all units. We evaluated the WUI based on a mile of where people live (FEIS, Vol. 1 p. 217). A one mile buffer from communities was used because HFRA describes WUI as ½ mile or 1 ½ miles depending on certain features. One mile splits this difference and is easy to approximate. Based on this analysis, we found that about 6 percent of lynx habitat is within 1 mile of communities; therefore we limited the amount of acres that can exceed the standards to 6 percent of each National Forest.

In addition, FWS identified two terms and conditions (TC) to minimize impacts of incidental take of lynx due to fuel treatment projects. TC 1 (6 percent limit) was already incorporated as described above; TC 2 says fuel treatment projects shall not result in

more than three adjacent LAUs exceeding the standard. This TC has been incorporated into the management direction – see Attachment 1.

Summary: Exempting fuel treatment projects within the WUI provided a defined area, as requested by FWS; we could evaluate the effects (FEIS, Vol. 1 Lynx section); it provides for community protection by reducing delay; and meets the purpose and need by constraining the area where adverse effects could occur. In addition we compiled information from each forest's 5 year fuel treatment program to evaluate effects – FEIS, Vol. 1, Lynx section and Appendix M, and USDI FWS 2007. This information was not available for the DEIS. We found that although we would limit adverse effects to 6 percent of lynx habitat, it is more likely only 1.4 percent or less of lynx habitat would have adverse effects. This is because the fuel treatment program of work within the WUI only amounts to 1.4 percent of lynx habitat and many projects can be designed to meet the vegetation standards. Regardless, the vegetation standards would apply to fuel treatments on 94 percent of lynx habitat.

In addition, by addressing the exemption and putting a limit on where adverse effects could occur this allowed us to take a cumulative look at the effects planning area wide vs. amending standards project-by-project.

FWS findings related to the vegetation management direction

The vegetation management direction set forth in the selected alternative conserves the most important components of lynx habitat: a mosaic of early, mature, and late successional staged forests, with high levels of horizontal cover and structure. These components ensure the habitat maintains its inherent capability to support both snowshoe hare prey base and adequate lynx foraging habitat (and denning habitat) during all seasons. These standards are required for all vegetation management actions on at least 93.5 percent of lynx habitat in the planning area. Areas within the WUIs (totaling six percent of lynx habitat) are exempt from these standards; however VEG G10 would apply and at least requires some consideration of the standards in designing fuel reduction treatments. Precommercial thinning, allowed under the exceptions, may affect an additional 0.5 percent of lynx habitat. Where these standards are applied to vegetation management projects, we anticipate few, if any, would have adverse effects on lynx. Collectively, application of these standards for vegetation management is expected to avoid adverse effects on lynx and promote the survival and recovery of lynx populations (USDI FWS 2007).

Management direction related to grazing

Livestock grazing may reduce or eliminate foraging habitat in areas that grow quaking aspen and willow in riparian areas (LCAS). These localized changes in habitat may affect individual lynx; however, no information indicates that grazing poses a threat to overall lynx populations (FEIS, Vol. 1, Appendix P, p. 40083). Appropriate grazing management can rejuvenate and increase forage and browse in key habitats such as riparian areas. Grazing was not mentioned in the original listing decision as a threat to

lynx, nor is it discussed in *the Ecology and Conservation of Lynx in the United States* (Ruggiero et al. 2000). In addition, FWS noted that they have found no research that provides evidence of lynx being adversely affected by grazing within the planning area or elsewhere, or of lynx movements within home ranges being impeded by grazing practices (USDI FWS 2007).

The LCAS recommended four standards for grazing management. These are reflected in Alternative B. *Standards GRAZ S1, GRAZ S2, GRAZ S3, and GRAZ S4* provide management direction for grazing in fire and harvest created openings, aspen stands, riparian areas and willow carrs, and shrub-steppe habitat. Alternatives C and D retain the management direction as standards. Alternative E changes the management direction to Guidelines GRAZ G1, GRAZ G2, GRAZ G3, and GRAZ G4 because neither the Remand Notice nor the *Ecology of Conservation of Lynx in the United States* recognized grazing as a threat to lynx.

Many people commented on Alternative E, the preferred alternative in the DEIS, and said the guidelines should be standards in the final alternative. Others said grazing should not be allowed at all, while two said the grazing guidelines should be retained. The FWS did not comment on the level of grazing management direction in Alternative E. We considered these comments in the FEIS Vol. 1 pp. 86-87, as well as Vol. 2, 75-76.

We decided the management direction for grazing in the selected alternative should be in form of guidelines, Guidelines GRAZ G1 through GRAZ G4 because there is no evidence grazing adversely affects lynx. These guidelines provide project design criteria for managing grazing in fire and harvest created openings, aspen, willow, riparian areas, and shrub-steppe habitats. The guidelines are designed to minimize potential adverse effects and improve habitat conditions. FWS found that with the application of these measures in most cases, there would be no effects or discountable effects to lynx (USDI FWS 2007). In addition, the Lynx Biology Team is in the process of updating the LCAS grazing recommendations.

Management direction related to human uses

Over-the-snow winter recreation

Lynx have very large feet in relation to their body mass, providing them a competitive advantage over other carnivores in deep snow. Various reports and observations have documented coyotes using high elevation, deep snow areas (Buskirk et al. 2000). Coyotes use open areas because the snow is more compacted there, according to research conducted in central Alberta (Todd et al. 1981). In another study in Alberta, coyotes selected hard or shallow snow more often than lynx did (Murray et al. 1994).

The LCAS recommended two objectives and two standards relating to winter dispersed recreation. These are reflected in Alternative B, *Objectives HU O1 and HU O3, and Standards HU S1 and HU S3*. In Alternative B, Standard HU S1 would maintain the existing level of groomed and designated routes. All action alternatives contain

Objectives HU O1 and HU O3 that discourage expanding snow-compacting human activities. Alternatives B, C, and D contain Standard HU S1 that would allow existing over-the-snow areas to continue but not expand into new, un-compacted areas. Alternative E, the DEIS preferred alternative, contains Guideline HU G11 that discourages the expansion of designated over-the-snow routes and play areas into uncompacted areas. All alternatives would allow existing special use permits and agreements to continue.

In comments on the DEIS some people asked that no dispersed over-the-snow use be allowed off groomed or designated trails and areas, saying the no net increase in groomed or designated routes did not go far enough. Others said the management direction should be in the form of a standard, not a guideline.

Some people said standards related to over-the-snow use should be removed. They said there is no evidence to show that coyotes and other predators use packed snow trails to compete with lynx for prey, and the amount of compaction created by snowmobiles is insignificant compared to the compaction created naturally by the weather. They were particularly concerned that if such language was introduced into plans, it could be difficult to change, incrementally restricting the places where snowmobiling is allowed. Others wanted an allowance made to increase use. These comments were considered for management direction – see FEIS Vol. 1 pp. 90-93.

In their comments on the DEIS the FWS agreed it is prudent to maintain the status quo and restrict expansion of over-the-snow routes until more information is available because of the possibility that, over time, unregulated expansion could impair further conservation efforts. They also said current, ongoing research in Montana may shed some information on the effects of snow compaction on lynx. They suggested careful consideration of the most recent information and the reality of possible impairment of options for the future. They suggested considering language that could provide more guidance on conditions where the expansion of over-the-snow routes would be warranted and acceptable.

We reviewed the results of research conducted since the DEIS was released. In northwestern Montana (within the northern lynx core area) Kolbe et al. (in press) concluded there was "little evidence that compacted snowmobile trails increased exploitation competition between coyotes and lynx during winter on our study area." Kolbe et al. (in press) suggested that compacted snow routes did not appear to enhance coyotes' access to lynx and hare habitat, and so would not significantly affect competition for snowshoe hare. They found that coyotes used compacted snow routes for less than 8 percent of travel, suggesting normal winter snow conditions allowed access by coyotes, regardless of the presence or absence of compacted snow routes. Kolbe was able to directly measure relationships between coyotes, compacted snow routes and snowshoe hare in an area that also supports a lynx population (USDI FWS 2007). In this study coyotes primarily scavenged ungulate carrion that were readily

available while snowshoe hare kills comprised only three percent of coyote feeding sites (Kolbe et al. in press).

In the Uinta Mountains of northeastern Utah and three comparative study areas (Bear River range in Utah and Idaho, Targhee NF in Idaho, Bighorn NF in Wyoming) Bunnell (2006) found that the presence of snowmobile trails was a highly significant predictor of coyote activity in deep snow areas.

From track surveys it was determined the vast majority of coyotes (90 percent) stayed within 350 meters of a compacted trail and snow depth and prey density estimates (snowshoe hares and red squirrels) were the most significant variable in determining whether a coyote returned to a snowmobile trail (Bunnell 2006). Of the four study areas recent lynx presence has only been documented on the Targhee NF. Bunnell indicated that "circumstantial evidence" suggested the existence of competition.

To date, research has confirmed lynx and coyote populations coexist, despite dietary overlap and competition for snowshoe hare, the primary prey of lynx, and alternate prey species. In some regions and studies, coyotes were found to use supportive snow conditions more than expected, but none confirm a resulting adverse impact on lynx populations in the area. The best scientific information (Kolbe's study) is from an occupied core area within our planning area. Radio-collared lynx and coyotes were monitored in this study, unlike the Bunnell study. This area is occupied by both lynx and coyotes and the study concludes coyotes did not require compacted snow routes to access winter snowshoe hare habitat.

Based on this information, we reevaluated management direction related to over-the-snow activities. An alternative to prohibit all snow-compacting activities or to limit dispersed use was evaluated, but not considered in detail because current research indicates this level of management direction is unwarranted (USDI FWS 2000a; FEIS, Vol. 1, Appendices O and P).

An alternative to drop all direction limiting snow compaction was not developed in detail because there is evidence competing predators use packed trails, suggesting a potential effect on individual lynx. We decided it was prudent to maintain the status quo and not let over-the-snow routes expand. However, we also decided it was reasonable to retain the direction as a guideline in the selected alternative which can be used in project design. The intent is to follow the management direction in guidelines. However, there may be some cases where expansion of over-the-snow routes would be warranted and acceptable, or where research indicates there would be no harm to lynx. Guidelines are better suited to adaptive management.

There is also no basis to establish any particular threshold of allowable increases. However, the selected alternative allows expanding winter recreation in some places where heavy public use existed in 1998, 1999, or 2000 – see Guideline HU G11.

The FWS concluded the Objectives HU O1 and O3, and Guideline HU G11 would be sufficient to maintain habitat effectiveness for lynx by limiting the expansion of

compacted snow routes and this conclusion would be tested through monitoring required in this decision. The best information available has not indicated compacted snow routes increase competition from other species to levels that adversely affect lynx populations, and under the selected alternative the amount of areas affected by snow compacted routes would not substantially increase (USDI FWS 2007).

Developed recreation

The LCAS identified risk factors associated with ski areas, including *short-term effects* on denning, foraging, and diurnal security habitat and *long-term effects* on movement within and between home ranges (LCAS, p. 2-10). Ski areas may eliminate habitat and pose a threat to movements; but most were constructed before lynx became a conservation issue (Hickenbottom et al. 1999, p. 70). Mitigation measures can be developed at the project level to lessen the effects of existing developments.

The LCAS recommended various objectives, standards, and guidelines in relation to developed recreation, specifically ski areas. These are reflected Alternative B, *Objectives ALL O1, HU O2, HU O3, and HU O4; Standards ALL S1 and HU S2; and Guidelines HU G1, HU G2, HU G3, and HU G10.* Objectives and standards *(LINK O1 and LINK S1)* regarding habitat connectivity also address concerns about developed recreation. These objectives, standards, and guidelines provide management direction about ski area development, expansion, and operations to provide for lynx movement, security, and habitat needs.

The alternatives retain similar management direction as Alternative B, except Alternatives C, D, and E changed Standard HU S2 to Guideline HU G10. Standard HU S2 requires diurnal habitat to be maintained, if needed. There is no evidence that diurnal security habitat is required by, or where it occurs on ski areas is used by lynx (USDI FWS 2007). Since the need to provide diurnal habitat is questionable, we determined it was better suited as a guideline.

In commenting on the DEIS some people said ski areas should be removed or at least prevented from expanding. Others recommended the final preferred alternative retain Standard HU S2. There are 24 existing down hill and cross country ski areas in occupied habitat in the planning area, which affect about 17,500 acres out of the 12.5 million acres of occupied habitat. Eight down hill ski areas are planned for expansion. One new ski area is proposed. Most of the ski areas are located on individual mountain ranges, not several together as in other areas in the west (FEIS, Vol. 1 p. 285). There is no indication these ski areas affect lynx travel because these ski areas are spread across the planning area. There is no information that indicates removal of ski areas is warranted, nor is limiting their expansion, as long as lynx needs are considered. The selected alternative includes standards to provide for lynx habitat connectivity, and includes guidelines to be use in the development of ski area expansion. Many adverse effects of developed recreation will be minimized under the selected alternative (USDI FWS 2007).

Minerals and energy

The LCAS said the main risk factors associated with minerals and energy development is related to the potential for plowed roads to provide access for lynx competitors.

These recommendations are reflected in Alternative B, *Objectives ALL O1, HU O1, and HU O5, Standards ALL S1 and HU S3, and Guidelines HU G4, and HU G5* which provide management direction for mineral and energy development. All except standard HU S3 remain essentially the same in all alternatives. Standard HU S3 says to keep mineral and energy development to designated routes. This standard was changed to Guideline HU G12 in Alternative E and in the selected alternative to be consistent with the application of management direction regarding over-the-snow routes discussed above.

In commenting on the DEIS some people said lease stipulations identifying constraints on developing oil and gas, coal, or geothermal resources should be one of the decisions made as a part of the management direction. This comment is addressed in the FEIS, Vol. 1 p. 94-95. FWS did not comment on the management direction related to minerals and energy development.

Forest roads

Lynx are known to have been killed by vehicle-collisions in Colorado (reintroduced population; paved, high-speed highways), in Minnesota (paved, high-speed highways) and in Maine (high-speed, relatively straight gravel roads on flatter terrain). The best information suggests that the types of roads managed by the Forest Service do not adversely affect lynx (USDI FWS 2007). Lynx mortality from vehicle strikes are unlikely, and to date none have been documented on National Forest System lands within the planning area, given the relatively slow speeds at which vehicles travel on these roads (due to topography and road conditions) and generally low traffic volumes.

Roads may reduce lynx habitat by removing forest cover. Along less-traveled roads where the vegetation provides good hare habitat, sometimes lynx use the roadbeds for travel and foraging (Koehler and Brittell 1990; LCAS, p. 2-12). A recent analysis on the Okanogan NF in Washington showed lynx neither preferred nor avoided forest roads, and the existing road density does not appear to affect lynx habitat selection (McKelvey et al. 2000; USDI FWS 2000a, p. 39).

Although many species of wildlife are disturbed when forest roads are used (Ruediger 1996), preliminary information suggests lynx do not avoid roads (Ruggiero et al. 2000) except at high traffic volumes (Apps 2000). In denning habitat, when roads are used during summer, lynx may be affected if they move their kittens to avoid the disturbance (Ruggiero et al. 2000; LCAS, p. 2-12).

The LCAS recommended several guidelines to address potential impacts of forest roads, including upgrading, cutting and brushing, and public use. These guidelines generally discourage improving access for people or reduce the likelihood people would see lynx near roads. These guidelines are reflected in Alternative B, *Guidelines*

HU G6, HU G7, HU G8, and HU G9. All the alternatives, including the selected alternative retain these guidelines.

In commenting on the DEIS some people said more restrictions on roads were needed to conserve lynx. They wanted new road construction halted, road densities identified and existing roads closed or eliminated, or they wanted the roads guidelines turned into standards. Other people said there should be no road-related standards or guidelines, saying no evidence exists that roads harm lynx. Some people said Guideline HU G9 should be deleted because there are no compelling reasons to close roads. The FEIS, Vol. 1, pp. 95 to 96 describes how these were considered in the development of the management direction. FWS had no comments related to these guidelines.

Based on our review we found no information indicating road building should be banned or that further restrictions were needed. The guidelines adequately address the known risks associated with roads. We determined guidelines were the appropriate level of management direction because guidelines provide information and guidance for project design and decision-making. Some guidance on how to design projects is warranted because roads may affect individual lynx.

Management direction related to linkage areas

Highways and connectivity

Highways impact lynx by fragmenting habitat and impeding movement. As traffic lanes, volumes, speeds, and rights-of-way increase, the effects on lynx are increased. As human demographics change, highways tend to increase in size and traffic density.

The LCAS recommended one objective, two standards, and a guideline directly or indirectly related to highways and connectivity. These are reflected in Alternative B, *Objective ALL O1*, *Standards ALL S1* and *LINK S1,* and *Guideline ALL G1*. Objective ALL O1 and Standard ALL S1 are intended to maintain connectivity. Standard LINK S1 is intended to provide a process for identifying wildlife crossings across highways.

Alternatives C, D, E and the selected alternative have the same objective and standards.

In comments on the DEIS some people said more should be done than just identifying highway crossings. FWS did not comment on management direction related to highways.

The LCAS recommended project standards for highways. It says to "Identify, map and prioritize site-specific locations, using topographic and vegetation features, to determine where highway crossings are needed to reduce highway impacts on lynx and other wildlife". Alternatives B, C, D, E and the selected alternative include Standard LINK S1 which reflects the intent of the LCAS recommendations. In addition, Guideline ALL G1 says "Methods to avoid or reduce effects on lynx should be used when constructing or reconstructing highways or forest highways across federal land. Methods could include fencing, underpasses or overpasses."

As noted in Chapter 3, Transportation Section, portions of three highways are likely to be reconstructed in linkage areas in the next ten years. State agencies in Wyoming, Idaho, and Montana are incorporating wildlife crossings into their highway design packages (Wyoming Department of Transportation, 2005; Idaho Transportation Department 2004; Montana DOT, FHWA, Confederated Kootenai and Salish Tribes 2006). Therefore no further management direction regarding wildlife crossings in the form of standards was found to be warranted.

Other considerations in linkage areas

Coordination among different land management agencies is important to the recovery of lynx because lynx have large home ranges and may move long distances. The LCAS recommended guidance for working with landowners to pursue solutions to reduce potential adverse effects. This recommendation is reflected in Alternative B, *Objective LINK O1*. This objective is the same among all alternatives, including the selected alternative.

In addition, it is important to mention the Forest Service is a lead member in the interagency Lynx Steering Committee and the Lynx Biology Team (FEIS, Vol. 1 Chapter 4), and played a key coordination role for the Lynx Science Team. These efforts facilitate relationships with other Federal and non-Federal landowners, including the States and provide a source for non-Federal land management guidance, through products such as the LCAS and Forest Plans. The Steering Committee would also provide a forum to build and sustain cooperative efforts with Canada to maintain lynx connectivity across the international border, if and when the need arises (USDI FWS 2007). The Forest Service also led the interagency effort to identify linkage areas.

Use of standards and guidelines

The selected alternative incorporates standards for those risk factors found to threaten lynx populations. Standards are management requirements used to meet desired conditions. Standards were used in those situations where we wanted to provide sideboards for project activities. Guidelines were used for those risk factors that may have possible adverse affects on individual lynx. Guidelines are management actions normally taken to meet objectives. They provide design criteria to meet lynx objectives. We expect guidelines to be followed in most cases, however based on site-specific conditions there may be reason not to follow a guideline.

FWS found guidelines would be implemented in most cases and adverse effects would not always occur where guidelines are not implemented. Effects would be based on site-specific conditions, with compliance with Section 7 consultation for each project. The FWS does not expect adverse effects as a result of changes of LCAS standards to guidelines to reach levels that impact lynx populations. Changes from standards to guidelines occurred when the best available information indicated the action was not likely to adversely affect lynx, or not likely to adversely affect lynx in most cases (i.e. where no conclusive or reliable information supported the standard in the LCAS).

Application of the standards, and for the most part guidelines, in core and occupied secondary areas substantively reduce the potential for adverse effects on lynx over the existing plans (USDI FWS 2007).

In addition, we will monitor the application of guidelines to see if our assumption they are normally applied is correct. Annually we will review the monitoring results to determine if further consideration is warranted.

Where to apply the decision

The selected alternative is incorporated into all forest plans in the planning area (FEIS, Vol. 1, Table 1-1 p. 5 and Figure 1-1). However, the management direction only applies to occupied lynx habitat. Those National Forests (the Beaverhead-Deerlodge, Bitterroot, Nez Perce in Region 1; the Bighorn in Region 2; and the Ashley, and Salmon-Challis in Region 4), or isolated portions of National Forests (the Custer, Gallatin, Helena and Lewis and Clark in Region 1), that presently are unoccupied by Canada lynx should consider the management direction that is now incorporated into their Forest Plans when developing projects, but are not required to follow the management direction until such time as they are occupied by Canada lynx.

According to the Conservation Agreement (USDA FS, USDI FWS 2006a), an area is considered occupied when: (1) there are at least 2 verified lynx observations or records since 1999 on the national forest, unless they are verified to be transient individuals; or (2) there is evidence of reproduction on the national forest.

This direction is in keeping with the current Conservation Agreement which only applies to projects and activities in occupied habitat. The FWS species lists on those forests and portions of forests that are unoccupied do not show lynx as a species for consideration. However, as noted in the Biological Opinion, the FWS said, and we agree that lynx detection is needed to assess whether further management direction is warranted (USDI FWS 2007). Therefore, we agree to work with the FWS to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary areas as described in the Biological Opinion, Term and Condition #4.

Incorporation of terms and conditions

On March 16, the FWS issued its Biological Opinion on the Northern Rockies Lynx Management Direction (USDI FWS 2007). In the opinion the FWS concluded that the management direction would overall be beneficial, but that some adverse effects to lynx would still be anticipated. It determined the management direction would not jeopardize the continued existence of lynx. The opinion also provides an incidental take statement which specifies the impact of any incidental taking of lynx. It also provides reasonable and prudent measures that are necessary to minimize the impacts of the take and sets forth terms and conditions which must be complied with in order to implement the reasonable and prudent measures.

The opinion identified three reasonable and prudent measures (RPM) with four associated terms and conditions (TC). We incorporated TC 1 through 3 into the management direction. The TCs are shown in italics in Attachment 1. TC #4 is agreed to as described below.

RPM #1: Minimize harm from fuels management by ensuring the acres impacted are not concentrated in a geographic area or several adjacent LAUs

Ensure fuels management projects conducted under the exemptions from Standards VEG S1, S2, S5 and S6 in occupied habitat:

TC 1. do not occur in greater than 6 percent of lynx habitat on any forest; and

TC 2. do not result in more than 3 adjacent LAUs not meeting the VEG S1 standard.

TC 1 was already part of the management direction. TC 2 has been added to Standard VEG S1.

RPM #2: Minimize harm from precommercial thinning and vegetation management by ensuring that LAUs either retain sufficient foraging habitat, or do not substantially reduce foraging habitat.

TC 3. In occupied habitat, precommercial thinning and vegetation management projects allowed per the exceptions listed under VEG S5 and S6, shall not occur in any LAU exceeding VEG S1, except for projection of structures. This requirement has been added to Standards VEG S5 and VEG S6.

RPM #3: On those Forests with currently unoccupied lynx habitat, lynx detection is needed to assess whether further management direction is warranted, including application of the management direction.

TC 4. Within 18 months of the date of the Biological Opinion, the Forest Service shall work with the Service to develop and complete an acceptable protocol to survey currently unoccupied lynx habitat in secondary areas. We agree to work with the FWS to develop and complete the protocol in unoccupied secondary areas.

The FWS also identified several monitoring and reporting requirements related to the above terms and conditions. We have incorporated these elements in the selected alternative – see Attachment 1, page 9.

Consideration of conservation recommendations

The FWS also identified three conservation recommendations which are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery programs, or to develop information.

Recommendation 1. The FS should ensure to the extent possible, that unoccupied habitat continues to facilitate and allow dispersal of lynx into the future. Therefore the

FWS recommends the management direction regarding linkage areas and connectivity by applied in the unoccupied areas (ALL O1, ALL S1, ALL G1; LINK O1, LINK S1 and LINK G1). The Forest Service already considers and applies this management direction in our current program of work; therefore we have decided to not apply the direction in unoccupied areas until such time the areas are occupied.

Habitat connectivity is considered in the design of permanent developments and vegetation management. Few, if any, vegetation projects affect habitat connectivity. Most, if not all units, have some level of riparian area protection requirements in their existing plans. This direction facilitates movement of lynx through riparian areas.

The greatest risk to impeding connectivity is in relation to roads and highways. The Forest Service already works with the State and Federal Highway agencies and is part of the steering team that produced the document *Eco-logical: An Ecosystem Approach to Developing Infrastructure Projects* (USDOT, 2006), FEIS Transportation Section. Also noted in this section is the highway work planned and projected in all lynx habitat and how the states have incorporated wildlife crossings into the design of those future projects. The FEIS p. 198 evaluated the effects of not applying the management direction to unoccupied areas and discloses that there would be minimal effects, especially to linkage areas because similar management direction or the intent of the direction already exists.

Recommendation 2. The Forest Service should coordinate with the Service to develop, within 18 months a method to monitor the amount and condition of lynx habitat in unoccupied secondary habitat. The Forest Service agrees to this recommendation.

Recommendation 3. The Forest Service should continue to be a leader in lynx conservation and understanding. The Forest Service agrees to this recommendation.

Canada Lynx Recovery Outline

On September 12, 2005 the FWS issued a Recovery Outline for Canada lynx (USDI FWS 2005). The outline is to serve as an interim strategy to guide and encourage recovery efforts until a recovery plan is completed. In the Recovery Outline, FWS categorized lynx habitat as: 1) core areas; 2) secondary areas; and 3) peripheral areas. The areas with the strongest long-term evidence of the persistence of lynx populations within the contiguous United States are defined as "**core areas**." As we discuss below and illustrated on the enclosed map (Figure 1-1), we have two core areas in the analysis area. Core areas have both persistent verified records of lynx occurrence over time and recent evidence of reproduction. According to FWS, focusing lynx conservation efforts on these core areas will ensure the continued persistence of lynx in the contiguous United States by addressing fundamental principles of conservation biology (USDI FWS 2007). The Recovery Outline says "Recovery of lynx will be achieved when conditions have been attained that will allow lynx populations to persist long-term within each of the identified core areas." (USDI FWS 2005).

At this time, the role of areas outside of these core areas in sustaining lynx populations is unclear. The fluctuating nature of lynx population dynamics and the ability of lynx to disperse long distances have resulted in many individual occurrence records outside of core areas, without accompanying evidence of historic or current presence of lynx populations. Areas classified as "**secondary areas**" are those with historical records of lynx presence with no record of reproduction; or areas with historical records and no recent surveys that document the presence of lynx and/or reproduction. We have one area of secondary habitat in the analysis area (Figure 1-1). Much of the secondary habitat is unoccupied. FWS hypothesizes that secondary areas may contribute to lynx persistence by providing habitat to support lynx during dispersal movements or other periods, allowing animals to then return to "core areas."

In "**peripheral areas**" the majority of historical lynx records are sporadic and generally corresponds to periods following cyclic lynx population highs in Canada. There is no evidence of long-term presence or reproduction that might indicate colonization or sustained use of these areas by lynx. However, some of these peripheral areas may provide habitat enabling the successful dispersal of lynx between populations or subpopulations. We have four areas of peripheral habitat in the analysis area (Figure 1-1). At this time, FWS does not have enough information to clearly define the relative importance of secondary or peripheral areas to the persistence of lynx in the contiguous United States (USDI FWS 2005, USDI FWS 2007).

In the Recovery Outline, FWS presented four preliminary recovery objectives. Below, we summarize FWS findings (USDI FWS 2007) of how the selected alternative meets the recovery objectives.

Preliminary recovery objective 1: *Retain adequate habitat of sufficient quality to support the long-term persistence of lynx populations within each of the identified core areas.*

FWS concludes the selected alternative fulfills this objective and adequately manages the two core areas within the planning area to support lynx recovery. The selected alternative supports the long-term persistence of lynx populations within the Northwestern Montana/Northeastern Idaho and Greater Yellowstone core areas, which constitutes one third of the core areas nationwide (USDI FWS 2007).

Preliminary recovery objective 2: *Ensure that sufficient habitat is available to accommodate the long-term persistence of immigration and emigration between each core area and adjacent populations in Canada or secondary areas in the United States.*

FWS concludes the selected alternative contributes to this recovery objective in part.

Lynx have the ability to move great distances, through varied terrain and habitat. Dispersing lynx use a variety of habitats and prey resources compared to lynx attempting to establish a home range and territory (USDI FWS 2007).

Connectivity between the United States and Canada appears intact thus far, as the Northwestern Montana/Northeastern Idaho core area is directly adjacent to Canada

and includes Glacier Park along its northeastern edge. The selected alternative provides and conserves core area lynx habitat directly adjacent to and contiguous with lynx habitat in Canada. Such habitat should accommodate both immigration of lynx from Canada and emigration from core areas to secondary areas or Canada.

The selected alternative applies to all core areas and occupied secondary areas. The direction includes objectives, standards, and guidelines to actively maintain or restore lynx habitat connectivity in and between linkage areas and LAUs (lynx home ranges). Because these measures apply in both core and occupied secondary areas, the selected alternative clearly meets the recovery objective of accommodated long-term connectivity across these broad areas.

The selected alternative is less clear in its effects in unoccupied secondary areas between the Northwestern Montana/Northeastern Idaho and Greater Yellowstone core areas. The management direction will not be applied to these areas until they become occupied. In the meantime existing plan direction will be followed.

Information indicates the likely impact of projected vegetation management on connectivity in this area may not be excessive. Fuel treatment projects in unoccupied habitat would likely occur in no more than two to three percent of all lynx habitat on any forest in secondary areas (FEIS Vol. 1, p. 195, USDI FWS 2007). In unoccupied areas precommercial thinning could occur on about 67,000 acres (about 1 percent) with full funding and 23,000 acres (0.4 percent) or less with projected funding. Timber harvest in unoccupied areas could result in creating stand initiation openings in more than 30 percent of an LAU. However, very few LAUs exceed this amount now and those that were in excess were in that condition due to past wildfires (FEIS, Vol. p. 155). Information regarding projected timber harvest was not available, but based on the past harvest history (Project File/Forests/FEIS/Data) it is unlikely regeneration harvest will occur to the same levels it did historically (1970s and 1980s). Based on this, FWS found vegetation management, under existing plan direction, would not preclude connectivity or opportunistic foraging conditions (USDI FWS 2007).

Development is another factor that may impede lynx movement. Four ski areas, affecting about 3,800 acres occur on National Forest System lands, in unoccupied secondary habitat; two of the four are planning expansions. None of these ski areas impede connectivity of lynx habitat at this time (USDI FWS 2007).

Connectivity for lynx could be more impacted by development such as highway expansions. Under existing plans and national efforts, methods to provide for safe wildlife crossings are currently being researched by all state highway departments and are being incorporated into highway improvements (FEIS, Vol. 1 p. 294-295).

In secondary unoccupied habitat, units should consider the management direction until such time the area becomes occupied. Given the estimates of projected impacts and the best information available regarding lynx dispersal movements, FWS concluded that under existing plan direction, these unoccupied secondary areas would reasonably be

expected to provide adequate connectivity and opportunistic foraging habitat for lynx to allow dispersal (USDI FWS 2007).

Preliminary recovery objective 3: *Ensure habitat in secondary areas remain available for continued occupancy by lynx.*

FWS found the selected alternative contributes to this recovery objective in part.

The recovery outline discusses the relative importance of core and secondary areas to lynx recovery. The selected alternative will fully provide management direction in occupied lynx habitat – both core and secondary. This measure ensures habitat in currently occupied secondary habitat remains available for continued occupancy by lynx.

The forests should consider the management direction in currently unoccupied secondary habitat. As noted in Objective 3, management actions could adversely affect unoccupied secondary lynx habitat. If and when lynx attempt to establish home ranges in secondary areas, individual lynx could be affected. It is also important to note that about 70 percent of unoccupied secondary lynx habitat in the planning area is in roadless or wilderness status where forest management actions are minimal and natural processes predominate.

Occupancy could occur if lynx populations in core areas were to expand, as periodically happens in lynx populations in Canada. However, given the projected impacts described in Objective 3, non-developmental areas, and existing habitat conditions, FWS believes it is reasonable to expect some lynx would occupy these secondary areas despite lack of mandatory direction in plans, but at a lower density than core. Further, if detected, once lynx occupy a previously unoccupied area, the management direction will apply. In the meantime, our vegetation management actions may degrade lynx habitat, but resulting conditions are typically temporary, not permanent. The risks of most vegetation management actions, such as timber harvest, precommercial thinning and other modifications of habitat, are reversible since typically forests regenerate overtime, with or without active restoration. Based on this FWS found lynx habitat on National Forests System lands in secondary areas will likely remain available for recovery of lynx over time (USDI FWS 2007).

The Opinion goes on to say the selected alternative does not fulfill Objective 3 entirely, as it lacks requirements for further or continued monitoring or surveying of unoccupied secondary areas for the amount and condition of lynx habitat and lynx presence, as recommended in the recovery outline.

However, through this decision we agree to work with the FWS to develop and complete a protocol to survey and to develop a method to monitor the amount and condition of lynx habitat in unoccupied secondary habitat. Our agreement to these items will aid in fulfilling Objective 3.

Preliminary recovery objective 4: *Ensure threats have been addressed so that lynx populations will persist in the contiguous United State for at least the next 100 years.*

FWS found that although plans do not apply for 100 years and thus cannot directly fulfill this objective, the selected alternative will allow lynx populations to persist on lands within core areas in the planning area within the foreseeable future. The selected alternative addresses the threat to the distinct population segment (DPS), inadequate regulatory measures, within core areas in the planning area by limiting, reducing or avoiding major adverse impacts of federal land management on lynx, as well as several other impacts or influences that do not rise to the level of a threat to the DPS. Further, a large portion of lynx habitat within the planning area (67 percent) remains in non-developmental status, where natural processes predominate. Finally, unoccupied lynx habitat within secondary and peripheral lynx areas is likely to retain habitat that provides opportunistic foraging habitat and connectivity adequate for dispersal of lynx, despite the lack of specific direction for lynx habitat management (USDI FWS 2007).

Findings Required by Laws, Regulation, and Policies

National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires analysis of decisions to ensure the anticipated effects on the environment within the analysis area are considered prior to implementation (40 CFR 1502.16). The analysis for the Northern Rockies Lynx Management Direction followed the NEPA guidelines as provided by the Council on Environmental Quality. Alternatives were developed based on the Purpose and Need, the primary issues, public comments, lynx needs as identified by the LCAS, research, and other publications. A total of six alternatives were considered in detail, including the No Action Alternative as required by NEPA (FEIS, pp. 26 to 69 and 107 to 134). Additional management direction was considered but eliminated from detailed study (FEIS, pp. 71 to 106). The range of alternatives is appropriate given the scope of the proposal, the public issues expressed, and the Purpose and Need for action (FEIS, Chapter 1).

Unavoidable adverse effects

The selected alternative does not represent an irreversible or irretrievable commitment of resources. Any disturbance to resources cannot occur without further site-specific analyses, section 7a consultation required under ESA and decision documents. For a detailed discussion of effects of this decision, see Chapter 3 of the FEIS (pp. 135 to 350).

Environmentally preferable alternative(s)

Regulations implementing NEPA require agencies to specify "the alternative or alternatives which are considered to be environmentally preferable" (40 CFR 1505.2(b)). The environmentally preferable alternative causes the least damage to the biological and physical environments and best protects, preserves, and enhances historical,

cultural, and natural resources. Based on the description of the alternatives considered in detail in the FEIS and in this ROD, we determined the selected alternative best meets the goals of Section 101 of the NEPA, and is therefore the environmentally preferable alternative for this proposed federal action.

FWS found timber harvest can be beneficial, benign, or detrimental depending on harvest method, and the spatial and temporal occurrence on the landscape (FEIS, Vol. 1, Appendix P). The vegetation standards in the selected alternative ensure the timber management program is beneficial to lynx. Standard VEG S1 limits the amount of lynx habitat that is in the stand initiation stage to 30 percent of each LAU at any time, ensuring a continuous rotation of all forest stages through time that supply lynx habitat in each LAU (FEIS, Vol. 2, p. 60). Standard VEG S2 allows no more the 15 percent of the lynx habitat to change to the stand initiation stage through timber harvest in a 10-year period. This limits the rate of change within an LAU to ensure sufficient habitat for lynx through time.

Precommercial thinning can impact lynx habitat. Standard VEG S5 precludes precommercial thinning except in certain situations that FWS has determined would have little effect upon lynx or their habitat, but would advance natural ecological conditions (FWS comment letter on the DEIS, pp. 8 and 9). While these exceptions have little effect on lynx (0.5 percent of lynx habitat) they have important positive impacts on other resources and situations such as maintaining aspen, western white pine, and whitebark pine, and fuel reduction near buildings.

Since the LCAS was published it has become clear that multistory mature stands with dense horizontal cover are important to lynx. In the selected alternative, Standard VEG S6 is instrumental in maintaining winter snowshoe hare habitat in multistoried forests which will aid in lynx persistence.

The selected alternative allows for management of fuels in the WUI under Guideline VEG G10, rather than standards. Under VEG G10 fuel reduction projects in the WUI should consider the VEG standards, but may deviate from them, up to a cap of 6 percent of the lynx habitat on each National Forest. Lynx habitat is still considered; however, if the fuel reduction needs are such that any of the four VEG standards cannot be met while at the same time meeting fuel treatment objective, the project may proceed under Guideline VEG G10. Fuel treatment actions in 94 percent of the lynx habitat must follow the VEG standards, while at the same time fuel treatment projects in the WUI can protect other valuable resources.

The selected alternative contains guidelines for the various activities on National Forest System land that may have possible adverse affects on individual lynx. Standards were changed to guidelines when the best available information indicated the action was not likely to adversely affect lynx, or not likely to adversely affect lynx in most cases (i.e. where no conclusive or reliable information supported the standard in the LCAS).

The selected alternative contributes to lynx conservation and recovery on National Forest System lands, but allows for management of other resources. Considering all this, the selected alternative is the environmentally preferred alternative because it causes the least damage to the biological and physical environments and best protects, preserves, and enhances natural resources.

National Forest Management Act

Significance determination: The purpose of this proposal is to incorporate management direction into plans for the conservation and recovery of Canada lynx.

In January 2005, the Forest Service removed the November 9, 2000 National Forest System Land and Resource Management Planning Regulations at 36 CFR 219, subpart A and replaced them with newly adopted regulations. The new regulations set forth a process for land management planning, including the process for developing, amending, and revising land management plans (36 CFR 219.1). These regulations also incorporate effective dates and transition periods. Section 219.4(e) says "Plan development, plan amendments or plan revision initiated before the transition period (starting January 5, 2005) may continue to use the provisions of the planning regulations in effect before November 9, 2000" – in this case the 1982 regulations. This proposal was initiated on September 11, 2001, which is before the transition period; therefore it is being completed under the requirements of the 1982 regulations.

The National Forest Management Act (NFMA) provides that forest plans may be amended in any manner, but if the management direction results in a significant change in the plan, the same procedure as that required for development and approval of a plan shall be followed. The 1982 regulations at 36 CFR 219.10(f) requires the agency to determine whether or not a proposed amendment will result in a significant change in the plan. If the change resulting from the amendment is determined not to be significant for the purposes of the planning process, then the agency may implement the amendment following appropriate public notification and satisfactory completion of NEPA procedures.

Forest Service Manual (FSM) 1920, section 1926.5 (Jan. 31, 2006) identifies factors to consider in determining whether an amendment is significant or non-significant for those plans using planning regulations in effect before November 9, 2000.

Changes to the land management plan that are not significant can result from:

1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.
2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis.
3. Minor changes in standards and guidelines.
4. Opportunities for additional projects or activities.

Examples of significant changes include:
1. Changes that would significantly alter the long-term relationship between levels of multiple-use goods and services originally projected.
2. Changes that may have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period.

The selected alternative will change in plans similar to examples of non-significant changes #1 and #3. The effects of this decision are not similar to either example of significant plan changes. These findings are discussed in further detail below.

Under the selected alternative the management direction will only apply to occupied habitat. At this time the Beaverhead-Deerlodge, Bitterroot, Nez Perce, Salmon-Challis, Ashley and Bighorn NFs are unoccupied; therefore these units should consider the management direction but will not have to apply it. Several mountain ranges on the Custer, Gallatin, Helena, and Lewis and Clark NFs are also unoccupied and the management direction will not have to be applied in these areas until lynx occupy the site. However, since the selected alternative could be applied to all units at some point in time, the following analyzes the effects on the planning area as a whole.

Changes in standards and guidelines are minor

The selected alternative adds one goal to forest plans; conserve Canada lynx. This goal is consistent with other goals in existing plans and other legal requirements to provide for habitat needs for threatened and endangered species. The selected alternative adds several objectives to the plans. These objectives require consideration of natural ecosystem process and functions, and consideration of lynx habitat needs. The additional objectives provide more species-specific guidance but do not alter the overall objectives to provide for habitat needs for threatened and endangered species. The proposal does not change any Management Area (MA) designation.

The selected alternative adds seven standards and twenty-four guidelines. The addition of these new standards and guidelines are minor as discussed below.

Changes would not significantly alter the long-term relationship between levels of multiple-use goods and services originally projected.

The management direction would not substantially alter outputs for grazing, minerals, energy, transportation systems, developed recreation areas, such as ski areas or winter recreation. These activities will not be prohibited by the management direction; however, habitat needs for lynx will need to be considered when managing these resources. The new direction will also not substantially alter timber outputs, even though it may affect growth and yield.

The selected alternative limits precommercial thinning in winter snowshoe hare habitat in young regenerating forests, with some exceptions – see Standard VEG S5. Precommercial thinning is allowed to restore aspen, whitebark pine and planted rust-

resistant western white pine. Precommercial thinning will also be allowed if new research indicates it will benefit or only have short-term adverse effects to lynx. Precommercial thinning is not allowed in young regenerating lodgepole pine forests, unless new research indicates it is beneficial or benign. Limiting precommercial thinning in lodgepole pine forests could affect growth and yield, and the potential to produce some products in the future, because these forests tend to stop growing if not thinned; however overall cubic foot volume would not be affected.

The Beaverhead-Deerlodge and the Bridger-Teton are the only units that have a majority of their precommercial thinning identified over the next ten years in lynx habitat and in lodgepole pine; therefore they are the only units that could see a reduction to growth and yield (FEIS, Vo1. 1, Appendix K-5). Under current programs, the units only have accomplished a portion of their thinning program (approximately 34 percent) due to budgets, so it is difficult to tease out the effects from the management direction in this proposal from effects of budgets. In addition, Standard VEG S5 allows for consideration of new information. Over the next ten to fifteen years information may become available that indicates some precommercial thinning in lodgepole pine forests may be beneficial to snowshoe hare (see DEIS comment letter #505).

Limiting precommercial thinning is unlikely to affect long-term sustained yield (LTSY), as defined by NFMA and FSH 1909.12, Chapter 60.5, because the cubic foot volume on the site does not substantially change. The volume is spread among more, smaller trees without thinning versus fewer, larger diameter trees with thinning. In addition, some precommercial thinning may be allowed in the future if new information becomes available. Timber outputs have never been at the level of LTSY over the life of these plans, so changes in LTSY are unlikely to lead to changes in outputs, especially if outputs are measured in cubic feet, which is the appropriate measure of LTSY.

In addition, the ASQ should not be affected on any units because the management direction does not preclude timber harvest. Standards VEG S1 and S2 may defer regeneration harvest in some areas, but Guideline VEG G1 encourages projects creating winter snowshoe hare habitat where it is lacking. It is likely there would be no change in overall timber outputs, but there may be changes in what material is harvested and where.

Changes would not have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period.

There are approximately 38.5 million acres within the 18 National Forests in the planning area. Of this, approximately 18 million acres or 48 percent has been mapped as lynx habitat (see table 3.1). Of the 18 million acres of mapped lynx habitat, approximately 8 million acres are in land allocations that allow for management actions. Therefore the management direction only potentially affects about 20 percent of the planning area. The most noticeable effects are likely to be the location and amount of precommercial thinning. The potential acreage that could be affected is between 11,000 to 15,000 acres per year. This is less than one percent of the planning area. It should be

noted that precommercial thinning is not constrained on an additional 18,000 acres per year outside lynx habitat (FEIS, Vol. 1 p 247-248).

Summary: Considering the three factors, we determined this management direction is not a significant change under NFMA to the 18 forest plans because it imposes minor changes over a limited area of these national forests.

While this amendment is not significant, the planning process necessary for significant amendments is ongoing or will begin soon on most units affected by this decision. In particular interest to the precommercial thinning discussion on the previous page, both the Beaverhead-Deerlodge and Bridger-Teton National Forests are being revised. The Beaverhead-Deerlodge should complete the revision process in 2007. Their DEIS for the Forest Plan recognizes the cumulative contribution the Northern Rockies Lynx Amendment may have on reducing growth and yield (DEIS, page 326). The Bridger-Teton should complete its revision in 2008.

Viability determination: This management direction is being adopted in accordance with the 1982 NFMA regulations for amending land and resource management plans. Plan amendments initiated before January 5, 2005 may proceed using the provisions of these regulations. The transition period to regulations implementing the 2005 planning rule ends on a unit's establishment of an Environmental Management System, or no later than January 7, 2008.

According to the 1982 NFMA regulations, fish and wildlife habitat shall be managed to maintain viable populations of Canada lynx in the planning area (36 CFR 219.19, 2000). For the purpose of this decision, the planning area is the range of lynx encompassed by the national forests subject to this decision. This is based on a biological delineation of the Northern Rockies made in the LCAS.

A viable population is, "one which has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well-distributed in the planning area." It is not possible to reliably predict future population demographics for lynx, and continued existence of lynx may be dependent on threats that exist outside of the planning area (health of Canadian populations, or linkage across other ownerships).

The national forests subject to this new direction will provide habitat to maintain a viable population of lynx in the Northern Rockies by maintaining the current distribution of occupied lynx habitat, and maintaining or enhancing the quality of that habitat. Based on the best scientific information available, and for the specific reasons provided below, this management direction will provide habitat to support persistence of lynx in the Northern Rockies in the long-term.

The LCAS was used as the basis for developing the selected alternative. The FWS Remand Notice (FEIS, Vol. 1, Appendix P), and other new information and research were also evaluated, and became the basis for updating standards and guidelines based upon the current state of knowledge regarding threats to lynx since the LCAS was compiled.

The greatest threats to lynx persistence and reproduction are from changes in vegetation structures that provide snowshoe hare habitat during summer and winter. Standards were developed under the selected alternative to provide direction for a variety of vegetation management activities that are most likely to affect lynx habitat (fuel treatments, precommercial thinning, timber harvest, etc.). These include standards for connectivity (ALL S1), habitat mapping (LAU S1), regeneration harvesting (VEG S2), precommercial thinning (VEG S5), and management of multistory mature and late successional forests (VEG S6). These standards are equal to or more protective than similar recommendations provided in the LCAS. In the Seeley Lake area of Montana, mature, spruce-fir forests with high horizontal cover are particularly important as winter foraging habitat and are more important than younger stands (Squires pers. com., Oct. 30, 2006) and the LCAS provides no specific management recommendations for these vegetative conditions within lynx habitat.

All of the core and secondary lynx habitat (100%) as defined in the *Recovery Outline* (USDI FWS 2005) that is occupied by lynx as defined in the *Occupied Mapped Lynx Habitat Amendment to the Canada Lynx Conservation Agreement* (USDA FS and USDI FWS 2006a) will be managed to conserve lynx.

The value of secondary habitat is unclear. The *Recovery Outline* (UDSI FWS 2005) states "Compared to core areas, secondary areas have fewer and more sporadic current and historical records of lynx and, as a result, historical abundance has been relatively low. Reproduction has not been documented." There currently is no evidence that suggest that unoccupied secondary habitat is considered necessary for a viable population of lynx. Secondary, unoccupied lynx habitat will have management direction implemented to conserve lynx if and when those administrative units become occupied. These National Forests (Beaverhead-Deerlodge, Bitterroot, Salmon-Challis and Nez Perce) which have secondary, unoccupied lynx habitat account for only about 30 percent of the total acres of core and secondary lynx habitat.

Even though the 6 percent limit (reflected in the vegetation standards) does not currently apply to unoccupied lynx habitat, those unoccupied forests would treat an average of 3.2 percent of lynx habitat within the WUI for fuel reduction over the next ten years (FEIS, Vol. 1, Lynx Section, and Appendix M). This is well below the 6 percent cap provided in the Biological Opinion (USDI FWS 2007). Overall fuel treatments, in and outside the WUI, in lynx habitat, average 5 percent within lynx habitat on these Forests.

In addition, The FWS Biological Opinion (2007) concluded that the proposed action is not likely to jeopardize the continued existence of lynx within the contiguous United States DPS. It also found the selected alternative will allow lynx populations to persist on lands in occupied core and secondary areas within the foreseeable future, and unoccupied secondary and peripheral habitat is likely to retain habitat that provides opportunistic foraging habitat and connectivity adequate for dispersal of lynx, despite the lack of specific direction for lynx management. The opinion goes on to say the

incorporation of the management direction over the large geographic area occupied by lynx within 12 of the 18 National Forests (12,150,000 acres) contributes to the landscape level direction necessary for the survival and recovery of lynx in the northern Rockies ecosystem.

Endangered Species Act

The Endangered Species Act creates an affirmative obligation ". . . that all federal departments and agencies shall seek to conserve endangered and threatened species" of fish, wildlife, and plants. This obligation is further clarified in a National Interagency Memorandum of Agreement (August, 2000) which states our shared mission is to ". . . enhance conservation of imperiled species while delivering appropriate goods and services provided by the lands and resources."

We completed biological assessments (BAs) for all listed species; one for wildlife and fish, and one for plants. For all listed species, except for Canada lynx, we determined the preferred alternative would have "no effect" or would be "not likely to adversely affect" them. The determination for Canada lynx was that, while the management direction in selected alternative would improve lynx conservation, the plans amended by selected alternative would still be "likely to adversely affect" lynx because individuals could be adversely affected as a result of the exemptions and exceptions to the vegetation standards for fuel treatments projects and precommercial thinning. The BAs were submitted to the FWS. The FS consulted with the FWS on the determinations and they concurred with the "no effect" and "not likely to adversely affect" determinations. The FWS provided written review as required by Section 7 of the ESA (USDI FWS 2007).

FWS issued a Biological Opinion on the "likely to adversely affect" determination on lynx (USDI FWS 2007). The opinion acknowledges the beneficial and adverse effects of the selected alternative. The opinion states that given the large number of acres covered by the proposed action, the existing plan language, and the beneficial effects of the management direction in the balance of these acres, the selected alternative is likely to have overall beneficial effects to lynx by addressing the primary threat identified at the time of listing: the inadequacy of existing regulatory mechanisms. Even acknowledging some adverse effects could still occur, primarily due to the allowance for fuel treatment projects and precommercial thinning, the opinion found the selected alternative is not likely to jeopardize the continued existence of Canada lynx. The Opinion identifies incidental take and reasonable and prudent measure, with associated terms and conditions to reduce take. These measures have either been incorporated into the management direction (TC 1, 2, and 3) or agreed to in this decision (TC 4).

Further section 7a consultation will occur on future site-specific projects and activities if they result in adverse affects to lynx. Future consultation will reference back to the BO issued on this decision to ensure the effects of the specific projects are commensurate with the effects anticipated in the opinion issued on this decision (USDI FWS 2007).

Critical habitat

On November 9, 2006, FWS published the final rule for the designation of Canada lynx critical habitat (Federal Register, Vol. 71, No. 217, pp. 66008 to 66061). National Forest System lands were not included in the critical habitat designation. There is no adverse modification to designated critical habitat from implementation of selected alternative.

National Historic Preservation Act

This decision is a programmatic action and does not authorize site-specific activities. Projects undertaken following the management direction will comply fully with the laws and regulations that ensure protection of cultural resources. It is our determination this plan direction complies with the National Historic Preservation Act and other statutes that pertain to the protection of cultural resources.

Clean Air Act

This decision is a programmatic action and does not authorize site-specific activities. Projects undertaken following the management direction will comply fully with the laws and regulations that ensure protection of air quality. It is our determination this plan direction complies with the Clean Air Act and other statutes that pertain to the protection of air quality.

Clean Water Act

This decision is a programmatic action and does not authorize site-specific activities. Projects undertaken following the management direction will comply fully with the laws and regulations that ensure protection of water quality. It is our determination this plan direction complies with the Clean Water Act and other statutes that pertain to the protection of water quality.

Invasive Species (Executive Order 13112)

Executive Order 13112 directs federal agencies not to authorize any activities that would increase the spread of invasive species. This decision is a programmatic action and does not authorize site-specific activities. We determined this plan direction complies with Executive Order 13112.

Environmental Justice (Executive Order 12898)

Executive Order 12898 directs federal agencies to identify and address, as appropriate, any disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. We determined from the analyses disclosed in the FEIS that this plan direction complies with Executive Order 12898.

Prime Farmland, Rangeland, and Forest Land

We determined from the analyses disclosed in the FEIS that prime farmland, rangeland, and forest land will not be affected by this decision because the selected alternative is a programmatic action and does not authorize site-specific activities.

Equal Employment Opportunity, Effects on Minorities, Women

The FEIS describes the impacts to social and economic factors in Chapter 3. The selected alternative will not have a disproportionate impact on any minority or low-income communities. We determined the selected alternative will not differentially affect the civil rights of any citizens, including women and minorities.

Wetlands and Floodplains (Executive Orders 11988 and 11990)

The selected alternative is a programmatic action and does not authorize site-specific activities. We determined the selected alternative will not have adverse impacts on wetlands and floodplains and will comply with Executive Orders 11988 and 11990.

Other policies

The existing body of national direction for managing National Forest System lands remains in effect.

Implementation and appeal provisions

The management direction will become effective 30 days after publication of the notice of availability of the FEIS in the Federal Register. Requests to stay implementation of the amended plans shall not be granted pursuant to 36 CFR 217.10.

This decision is subject to review pursuant to 36 CFR 217.3 (available at http://www.fs.fed.us/r1/planning/lynx.html). Any appeals must be postmarked or received by the Appeal Reviewing Officer within 45 days of the date the legal notices are published in the The Missoulian, the newspaper of record.

Appeals sent through the US Postal Service must be sent to:

USDA Forest Service
Attn: EMC Appeals
Mail Stop 1104
1400 Independence Ave., SW
Washington, DC 20250-1104

Appeals sent through FedEx, UPS, or a courier service must be sent to:

USDA Forest Service
Ecosystem Management Coordination
Attn: Appeals
Yates Bldg., 3CEN
201 14th Street, SW
Washington, DC 20250

Appeals may be hand-delivered to the above address during regular business hours, 8:00 AM to 4:30 PM Monday through Friday, excluding holidays; or sent by fax to (202) 205-1012; or by email to appeals-chief@fs.fed.us. Emailed appeals must be submitted in rich text format (.rtf) or Word (.doc) and must include the decision name in the subject line. Any notice of appeal must be fully consistent with 36 CFR 217.9 and include at a minimum:

- A statement that the document is a Notice of Appeal filed pursuant to 36 CFR Part 217;
- The name, address, and telephone number of the appellant;
- Identify the decision to which the objection is being made;
- Identify the document in which the decision is contained, by title and subject, date of the decision, and name and title of the Deciding Officer;
- Specifically identify the portion(s) of the decision or decision document to which objection is made;
- The reasons for the appeal, including issues of fact, law, regulation, or policy and, if applicable, specifically how the decision violates law, regulation, or policy; and
- Identification of the specific change(s) in the decision that the appellant seeks.

Further information and contact person

The Northern Rockies Lynx Management Direction FEIS, the Summary, this ROD and the FWS Biological Opinion, as well as other background documents are available on the Web at http://www.fs.fed.us/r1/planning/lynx.html.

For further information regarding the FEIS, ROD, or the plan direction for Canada lynx contact:

Timothy Bertram, Lynx Coordinator
USDA Forest Service, Northern Region
P.O. Box 7669
Missoula, MT 59807
Telephone: (406) 329-3611

I am the Responsible Official for incorporating the Northern Rockies Lynx Management Direction into the Land and Resource Management Plans for the Bighorn and Shoshone National Forests in the Rocky Mountain Region of the Forest Service.

Rick D. Cables — March 21, 2007

Rick D. Cables — Date

Regional Forester, Rocky Mountain Region

I am the Responsible Official for incorporating the Northern Rockies Lynx Management Direction into the Land and Resource Management Plans for the Ashley, Bridger-Teton, Targhee, and Salmon-Challis National Forests in the Intermountain Region of the Forest Service.

Jack G. Troyer
Regional Forester, Intermountain Region

March 23, 2007
Date

I am the Responsible Official for incorporating the Northern Rockies Lynx Management Direction into the Land and Resource Management Plans for the Beaverhead-Deerlodge, Bitterroot, Clearwater, Custer, Flathead, Gallatin, Helena, Idaho Panhandle, Kootenai, Lewis & Clark, Lolo, and Nez Perce National Forests in the Northern Region of the Forest Service.

Kathleen A. McAllister — March 23, 2007

Kathleen A. McAllister
Acting Regional Forester, Northern Region

Date

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APPENDIX H – KEY WATERSHEDS

Chapter 3 of this Plan lists specific Goals, Objectives and Standards for 56 fish key watersheds and 15 restoration key watersheds. These watersheds are listed in the table below. The purpose and method for selection were different between fish key watersheds and restoration key watersheds. This is discussed below the table. Key watersheds will often receive priority over non-key watersheds for watershed analyses and restoration work, but not always. As watershed analysis and subsequent restoration projects are completed restoration watersheds may be removed from the list and others added

Table 1. Key Watersheds Identified for this Planning Period

Key Watershed	Resource Emphasis	District
Blacktail	fish	Butte
Columbus Gulch	fish	Butte
German Gulch	fish	Butte
Andrus	fish	Dillon
Bear-Lima	fish	Dillon
Buffalo	fish	Dillon
Fox	fish	Dillon
Nicholia Low	fish	Dillon
Painter	fish	Dillon
Reservoir	fish	Dillon
Boulder Low	fish	Jefferson
Boulder Up	fish	Jefferson
Halfway	fish	Jefferson
Little Boulder Up	fish	Jefferson
Whitetail Up	fish	Jefferson
Burnt	fish	Madison
California	fish	Madison
Greenhorn	fish	Madison
Horse	fish	Madison
Idaho	fish	Madison
Indian-Tobaccoroot	fish	Madison
Soap	fish	Madison
Wall	fish	Madison
Bielenberg	fish	Pintler
Carpp	fish	Pintler
Copper-AP Wild	fish	Pintler
Copper-Boulder	fish	Pintler
Cottonwood	fish	Pintler
E F Rock Up	fish	Pintler

Key Watershed	Resource Emphasis	District
Falls Fork	fish	Pintler
Foster	fish	Pintler
Fred	fish	Pintler
Lower Willow Cr	fish	Pintler
Meadow-Philipsburg	fish	Pintler
M F Rock	fish	Pintler
M F Rock Low	fish	Pintler
N F Rock Low	fish	Pintler
N F Rock Up	fish	Pintler
Racetrack	fish	Pintler
Rock Up	fish	Pintler
Ross	fish	Pintler
Sand Basin	fish	Pintler
S Boulder	fish	Pintler
S F Ross	fish	Pintler
S F Willow	fish	Pintler
Stony	fish	Pintler
Twin Lakes	fish	Pintler
Warm Springs	fish	Pintler
W F Rock	fish	Pintler
Harvey Creek	fish	Pintler
Doolittle	fish	Wisdom
Plimpton	fish	Wisdom
Cherry Pioneers	fish	Wise River
Deep	fish	Wise River
Jerry Up	fish	Wise River
Squaw-Pioneers	fish	Wise River
Girard Gulch	restoration	Butte
Birch	restoration	Dillon
Lost-Pioneer	restoration	Dillon
Saginaw	restoration	Dillon
Willow Lower	restoration	Dillon
Willow Upper	restoration	Dillon
Beaver (Little Boulder)	restoration	Jefferson
Hells Canyon	restoration	Jefferson
Little Boulder Low	restoration	Jefferson
North Fk Little Boulder	restoration	Jefferson
Freezeout	restoration	Madison
South Willow	restoration	Madison

Key Watershed	Resource Emphasis	District
Moosehorn	restoration	Wisdom
Seymour	restoration	Wisdom
Sullivan	restoration	Wise River

Methods for selecting Fish Key Watersheds

Management in Fish Key Watersheds emphasizes conservation of westslope cutthroat and bull trout by protecting and restoring components, processes, and landforms that provide quality habitat. The objective for selecting Fish Key Watersheds was to prescribe this management direction to a well distributed group of the strongest populations across the Forest. The length of stream occupied by a population was used as the primary indicator for population strength. Watersheds with cutthroat populations which are, or nearly are, genetically pure, tended to receive greater consideration than those with lower percentages of purity. Achieving an adequate distribution was important. For this reason, some key watersheds were selected which have less robust populations than some others on the Forest. Maintaining migratory life histories is an important element of conservation. Thus, where connected habitats were important in sustaining populations, groups of watersheds were selected. The result was the clumping of key watersheds in the Rock Creek drainage.

Methods for selecting Restoration Watersheds

Management in Restoration Key Watersheds emphasizes restoration of integrated ecological processes at the watershed scale. A paper in the project file details methods and data used to identify priority restoration watersheds, "*A Method to Identify Priority Restoration Watersheds for Use in the Region 1 Integrated Restoration and Protection Strategy,*" Bryce A. Bohn, Hydrologist, Beaverhead-Deerlodge NF, 2007. The method was developed for Region One use and implemented on the BDNF based on modifying a procedure developed by Winters et al. (2004d) titled, "*Conceptual framework and protocols for conducting multiple scale aquatic, riparian, and wetland ecological assessments for the USDA Forest Service Rocky Mountain Region, Reports 1 and 2*."

Watersheds were prioritized by identifying, evaluating, and ranking anthropogenic activities known to influence watershed condition. This assumes more activity in or near streams translates to a higher risk to watershed function. The table below identifies the activities and measurements used to rank watersheds.

Table 2. Metrics used to assess watershed risk

Activity	Evaluation Criteria Applied within the Drainage Polygon
Transportation	Miles of roads within 300' of stream channel/stream mile Number of stream crossings/stream mile
Mineral Extraction	Number of current and historic mines Number of mines within 300' of stream channels
Vegetation Management	Percent of key watershed within an active grazing allotment Percent of suitable range within 300' of stream channel (more than 10% of watershed must be within an active allotment)

	Percent of HUC with more than 60% crown removal within last 20 years
Administrative Designation	Miles of 303(d) listed stream/miles of stream channel

The analysis process is summarized as follows:

1. Anthropogenic activities in each watershed are evaluated. The watershed is assigned a ranking value (0 to 4) based on the relative contribution a given anthropogenic activity has had within the watershed (e.g., roads).
2. Quartile ranking values for all activities are totaled for each watershed (e.g., rank sum). Rank sum values could range from a minimum of 0 (if the key watershed had none of the 8 activities) to a maximum 32 (if the key watershed had the top rank for each of the 8 activities).
3. The distribution of the rank sums for all watersheds is divided into quartiles. Group 1 identifies those watersheds within the lowest quartile of cumulative rankings. Group 2 identifies watersheds within the 25^{th}-50^{th} percentiles of cumulative rankings. Group 3 identifies those watersheds within the 50^{th}-75^{th} percentiles of cumulative rankings. Group 4 identifies those watersheds within the highest quartile of cumulative rankings.
4. The distribution of these additive effects groups is mapped using GIS.
5. The watersheds in Group 4 are then identified as having the highest risk of degraded conditions. This conclusion is then validated by district and forest staff members for restoration priority.

This analysis was applied to the 348 watersheds on the BDNF which contained at least 10% National Forest System land. Fifteen were selected to focus watershed restoration activities on, in the next planning cycle. Not all of the watersheds, however, were selected from the 4^{th} Quartile. For example, preference was given to Quartile 3 watersheds adjacent to important westslope cutthroat trout population if improved conditions would facilitate connectivity or aid viability. Similarly, preference was given to watersheds where integrated restoration opportunities compatible with watershed restoration were available. An attempt was made to distribute key restoration watersheds across landscapes and districts. Key watersheds will usually receive priority over non-key watersheds for analyses and restoration work.

APPENDIX I - TERMS AND CONDITIONS FOR PROTECTION OF WOLVES

Source: Extracted from US Fish and Wildlife Service Biological Opinion, 9/23/08, the Effects of the Revised Land and Resource Management Plan (2008) For the Beaverhead-Deerlodge National Forest on Gray Wolves.

This appendix will be revised to reflect the most current consultation in accordance with 50 CFR 402.16.

Action area, as defined by the Act, is the entire area to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. For the purposes of this biological opinion, we have defined the action area to be the area on the Forest where gray wolves are listed as endangered. Gray wolves that occur in the northern portions of the Forest west of I-15 and north of I-90 are within the northwest Montana Recovery Area and are listed as endangered. This encompasses portions of the Butte, Jefferson and Pintler Ranger Districts. For many years, the Forest has been conducting effects analyses under the assumption that wolves may be present in this area.

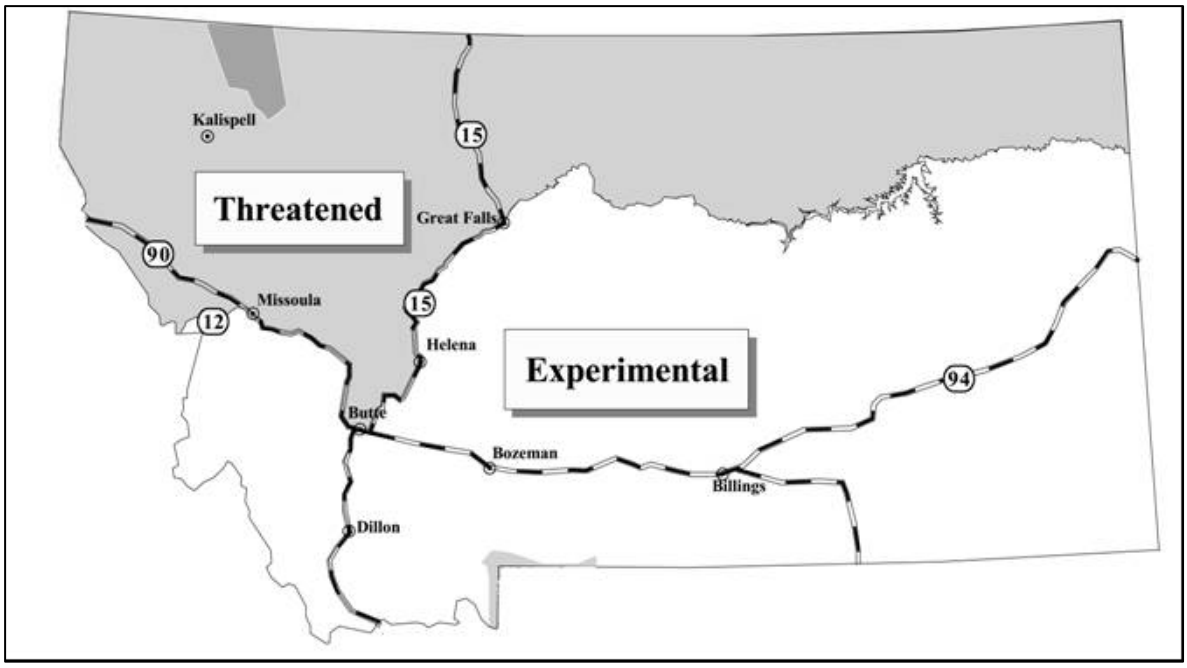


Figure 1. Montana Wolf Management Areas

Terms and conditions

These terms and conditions are nondiscretionary:

1. To proactively decrease the risk of wolf depredations, encourage allotment permittees to use non-lethal deterrents such as fladry and/or electric night pens.

2. Include a clause in grazing permits that occur within the action area requiring the permittee to notify the Forest of any wolf depredation on livestock or conflicts between wolves and livestock, even if the conflict did not result in the loss of livestock, within 24 hours of discovery. The Forest shall work with Montana Fish, Wildlife and Parks and Wildlife Control personnel to determine appropriate follow-up action(s).

3. Include a clause in all grazing permits that occur within the action area requiring the permittee to notify the Forest of any livestock losses, regardless of the cause, within 24 hours of discovery. Agency personnel and the permittee would then jointly determine how to properly treat or dispose of livestock carcasses so as to eliminate any potential attractant for wolves.

Reporting Requirements – to demonstrate compliance with the terms and conditions the Forest shall:

1. Maintain an up-to-date record for the action area including but not limited to the following:

a) Description of wolf conflicts and depredations;

b) What was implemented to try to minimize conflicts (fladry, etc);

c) Did conflict result in the lethal removal of a wolf or wolves

2. Complete a report with this information and submit it to the Service's Montana Field Office by March 1 of each year for the preceding calendar year.

3. The Forest shall notify the Service's Montana Field Office if a change in the status of sheep grazing on the Forest is being considered.

4. The Forest shall notify the Service's Montana Field Office, within 72 hours of any livestock depredation by wolves or the management removal or human-caused death of a wolf.